Access DB# 22185

SEARCH REQUEST FORM

Scientific ~~and Technical~~ Information Center

Requester's Full Name: Everett White Examiner #: 67057 Date: 8/4/2000
Art Unit: 1623 Phone Number 308-4621 Serial Number: 09/254,407
Mail Box and Bldg/Room Location: 7B13 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

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Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: See Cover sheet

Inventors (please provide full names): See Cover Sheet

Earliest Priority Filing Date: See Cover Sheet

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

Please search the sulfated polysaccharides of claims 1-11, the pharmaceutical compositions thereof in claims 12 and 13, and how the sulfated polysaccharide may be used in Claims 14-15. The broadest claims are claims 1, 12, and 14-16. A copy of the claims (1-16) and the Abstract is provided. A search of the USPATFULL file is also requested.

The cover sheet which discloses the inventor names, title of the invention, and the earliest priority filing date is also provided.

Point of Contact:
Beverly Shears
Technical Info. Specialist
CM1 12C14 Tel: 308-4994

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STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher: Beverly Shears	NA Sequence (#)	STN ✓
Searcher Phone #:	AA Sequence (#)	Dialog
Searcher Location:	Structure (#)	Questel/Orbit
Date Searcher Picked Up:	Bibliographic	Dr.Link
Date Completed: 08-14-00	Litigation	Lexis/Nexis
Searcher Prep & Review Time: 12	Fulltext	Sequence Systems
Clerical Prep Time:	Patent Family	WWW/Internet
Online Time: 27	Other	Other (specify)

PTO-1590 (1-2000)

FILE 'REGISTRY' ENTERED AT 15:01:20 ON 14 AUG 2000
L1 6 S (PECTIN OR HYDROXYETHYL CELLULOSE OR CARBOXYMETHYL CELLULOSE OR ALGINATE OR PECTIN OR HYALURONIC ACID OR CELLULOSE)/CN
E ALGINATE/CN
E ALGINATES/CN

E MATRIX METALLOPROTEINASE/CN 5
L4 52 S MATRIX METALLOPROTEINASE ?/CN

FILE 'CAPLUS' ENTERED AT 15:07:55 ON 14 AUG 2000
L1 6 SEA FILE=REGISTRY ABB=ON PLU=ON (PECTIN OR HYDROXYETHYL CELLULOSE OR CARBOXYMETHYL CELLULOSE OR ALGINATE OR PECTIN OR HYALURONIC ACID OR CELLULOSE)/CN
L4 52 SEA FILE=REGISTRY ABB=ON PLU=ON MATRIX METALLOPROTEINASE ?/CN
L5 6378 SEA FILE=CAPLUS ABB=ON PLU=ON (L1 OR POLYSACCHARIDE OR POLY SACCHARIDE OR CELLULOSE OR ALGINATE OR PECTIN OR HYALURONIC OR ORC)(3A)(SULFAT? OR SULPHAT?)
L6 327 SEA FILE=CAPLUS ABB=ON PLU=ON L5(10A)(TREAT? OR THERAP?)
L7 39 SEA FILE=CAPLUS ABB=ON PLU=ON L6 AND (L4 OR MATRIX(W)(METALLOPROTEINASE OR METALLO PROTEINASE) OR MMP OR WOUND OR ?COAGULAT? OR ?COAGULANT? OR ?CLOT?)

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L7 ANSWER 1 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1999:300639 CAPLUS
DOCUMENT NUMBER: 131:106757
TITLE: **Sulfated polysaccharides** derived from dextran: biomaterials for vascular **therapy**
AUTHOR(S): Chaubet, Frederic; Huynh, Remi; Champion, Jacqueline; Jozefonvicz, Jacqueline; Letourneur, Didier
CORPORATE SOURCE: Laboratoire de Recherches sur les Macromolecules, CNRS UMR 7540, Institut Galilee, Universite Paris, Villetaneuse, 93430, Fr.
SOURCE: Polym. Int. (1999), 48(4), 313-319
CODEN: PLYIEI; ISSN: 0959-8103
PUBLISHER: John Wiley & Sons Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB CMDBS are synthetic dextran derivs. randomly substituted with carboxymethyl (CM), benzylamide (B), sulfonate and sulfate groups (S). Depending on their overall compn., these compds. are endowed with heparin-like properties such as **anticoagulant** activity. Indeed, some CMDBS with high CM and S contents delay blood **coagulation**, while some derivatized dextrans without

significant **anticoagulant** capacity are potent antiproliferative agents for rat smooth muscle cells (SMCs) in vitro as well as heparin. The growth inhibition is dose dependent, reversible and non- toxic. This result is of prime interest for medical use because proliferation of vascular SMCs is postulated to be a key step in the pathogenesis of atherosclerosis or restenosis after vascular surgery such as angioplasty. By varying the overall compn. in the different substituents, we have also prepd. CMDBS exhibiting a stimulatory effect on the in vitro growth of human endothelial cells (EC). Heparin, under similar exptl. conditions, slightly inhibited EC growth. The data indicate a synergistic role of all substituents grafted onto the dextran backbone without considering that any can be responsible alone for this effect. We conclude that a suitable distribution of CM, B and S groups on dextran can mimic heparin activity in terms of **anticoagulant** activity and antiproliferative capacity on SMC growth. Moreover, some CMDBS are also endowed with a stimulatory effect on EC growth. These properties confer great interest to these synthetic polysaccharides for vascular therapy.

REFERENCE COUNT: 42

REFERENCE(S):
(1) Aubert, N; Biomaterials 1987, V8, P100 CAPLUS
(2) Aubert, N; Biomaterials 1987, V8, P24 CAPLUS
(4) Barzu, T; Biochim Biophys Acta 1985, V845, P196 CAPLUS
(6) Bourdillon, M; Prog Biochem Pharmacol 1977, V13, P103 CAPLUS
(8) Castellot, J; Am J Respir Cell Mol Biol 1990, V2, P11 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 39 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1999:182978 CAPLUS

DOCUMENT NUMBER: 130:217619

TITLE: Effects of heparin and related sulfated polysaccharides on tissue factor expression induced by mitogenic and non-mitogenic factors in human vascular smooth muscle cells

AUTHOR(S): Xuereb, J. M.; Herbert, J. M.; Sie, P.; Boneu, B.; Constans, J.

CORPORATE SOURCE: Laboratoire Recherche Hemostase Thrombose, Hopital Purpan, Toulouse, F-31300, Fr.

SOURCE: Thromb. Haemostasis (1999), 81(1), 151-156
CODEN: THHADQ; ISSN: 0340-6245

PUBLISHER: F. K. Schattauer Verlagsgesellschaft mbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Smooth muscle cells (SMCs) of the intima are generally quiescent and non proliferative. Their proliferation due to different

stimulations occurs in myointimal hyperplasia and is regularly present in atherogenesis or after transluminal angioplasty leading to vascular occlusive stenosis. In the course of these pathologies, the tissue factor (TF) synthesis was upregulated and rapidly expressed at the membrane of the SMCs. Heparin is known to inhibit SMCs proliferation induced by FCS. The inhibitory effect of heparin was evaluated on the expression of TF induced by various mitogenic and non-mitogenic agents. Inhibition by heparin of SMCs proliferation induced by the same agonists was also detd. Quiescent human vascular SMCs from normal adult arteries were **treated** for 1 h by heparin and related **sulfated polysaccharides** before stimulation by the agonists. All the agonists up-regulated the expression of TF antigen and activity. TF expression induced by the growth factors was inhibited by heparin (IC 50: 10-30 .mu.g/mL), and other sulfated polysaccharides (IC 50: 1-5 .mu.g/mL). SMCs proliferation, late activation of the extracellular signal-regulated kinases (ERK1/2), and PKC activity were inhibited by heparin (IC 50: 30-50 .mu.g/mL) in SMCs stimulated by fetal calf serum but not in SMCs treated by PDGF or EGF. In contrast, heparin had no effect on LPS-induced TF expression nor on LPS-induced PKC activation. These results indicate that, besides its well known effect on SMC proliferation, heparin displays an inhibitory effect on cell mediated blood **clotting** processes through regulation of the TF expression.

REFERENCE COUNT: 43

REFERENCE(S):
(2) Almus, F; Thromb Res 1988, V50, P339 CAPLUS
(3) Cadroy, Y; Thromb Haemost 1996, V75(1), P190 CAPLUS
(4) Clowes, A; Lab Invest 1985, V52, P611 CAPLUS
(6) Daum, G; Circulation Res 1997, V81, P17 CAPLUS
(8) Gotoh, Y; Eur J Biochem 1991, V10, P2661 CAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 39 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:550445 CAPLUS
DOCUMENT NUMBER: 129:177144

TITLE: O-Sulfated bacterial polysaccharides

INVENTOR(S): Zoppetti, Giorgio; Oreste, Pasqua; Cipolletti, Giovanni
PATENT ASSIGNEE(S): Inalco S.p.A., Italy

SOURCE: PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9834958	A1	19980813	WO 1998-EP598	19980204
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9863943	A1	19980826	AU 1998-63943	19980204
EP 958307	A1	19991124	EP 1998-909387	19980204
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			IT 1997-MI252	19970207
			WO 1998-EP598	19980204

AB A process is disclosed for the prepn. of O-sulfated K4, K5 and K40 polysaccharides useful for the treatment of tumoral, HIV-1 and **coagulation** pathologies and in cosmetic prepns., wherein the K4, K5 or K40 polysaccharide in the form of sodium salt is suspended in an aprotic solvent and directly submitted to the reaction of O-sulfation with a pyridine-sulfur trioxide or trimethylamine-sulfur trioxide adduct or with chlorosulfonic acid.

L7 ANSWER 4 OF 39 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1998:183947 CAPLUS
DOCUMENT NUMBER: 128:248647
TITLE: **Sulfated polysaccharides** and uses thereof in medical **treatment**
INVENTOR(S): Grady, Michael William; Doyle, Peter John; Sinclair, Laura; Houston, Paul
PATENT ASSIGNEE(S): Johnson & Johnson Medical, Inc., USA; Grady, Michael William; Doyle, Peter John; Sinclair, Laura; Houston, Paul
SOURCE: PCT Int. Appl., 22 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811141	A1	19980319	WO 1997-GB2477	19970910
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW,				

MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG

GB 2317182	A1	19980318	GB 1996-18958	19960911
AU 9741315	A1	19980402	AU 1997-41315	19970910
EP 925310	A1	19990630	EP 1997-939097	19970910
R: DE, DK, ES, FR, GB, IT, SE, PT, IE				
NO 9901160	A	19990510	NO 1999-1160	19990310
PRIORITY APPLN. INFO.:			GB 1996-18958	19960911
			WO 1997-GB2477	19970910

AB The invention provides sulfated oxidized regenerated cellulose (ORC) compds., sulfated alginates, and the salts and hydrates thereof. The compds. are obtained by sulfation of oxidized regenerated cellulose with sulfur trioxide. The invention also provides pharmaceutical compns. comprising the compds., in particular compns. for the treatment of medical conditions mediated by a **matrix metalloproteinase** and **anticoagulant** pharmaceutical compns. ORC was prepd. and sulfated and studies showed that the presence of sulfated ORC retarded hemostasis relative to a pure collagen sponge.

L7 ANSWER 5 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1997:456143 CAPLUS
DOCUMENT NUMBER: 127:156730
TITLE: Low-molecular-weight **sulfated polysaccharides**, and preparation and **therapeutic** uses thereof
INVENTOR(S): Shi, Guan Hua
PATENT ASSIGNEE(S): Ocean University of Oingdao, Peop. Rep. China
SOURCE: U.S., 16 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5646130	A	19970708	US 1995-498013	19950630

AB An oligosaccharide contg. about 20 monosaccharide units is provided. This oligosaccharide, designated (M9G)2, is a copolymer .beta.-D-(1.fwdarw.4) connected mannuronopyranose units and an .alpha.-L-(1.fwdarw.4) connected guluronic acid unit at a ratio of 9:1. In addn., 40-60% of the carboxylic functional groups are esterified with propanol, 2-propanol or methanol, and substantially all of the C2 carbons and about 50% of the C3 positions of the

residues are sulfated, such that the resulting compd. contains about 7-13% org. sulfur. The compds. are used for the prevention and therapy of thrombosis-induced ischemic vascular diseases of the heart and the central nervous system, for treating acute thrombosis-induced brain infarction and in coronary ischemia-induced angina, and for treating hyperlipoproteinemia and lowering the relative amt. of cholesterol.

L7 ANSWER 6 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:762740 CAPLUS
DOCUMENT NUMBER: 126:54662
TITLE: **Polysaccharide sulfate therapy** of refractory nephrosis in children
AUTHOR(S): Zhou, Wenli; Xu, Liyuan; Wang, Xiuying
CORPORATE SOURCE: Second Peoples Hosp. Qingdao, Tsingtao, 266071, Peop. Rep. China
SOURCE: Zhongguo Haiyang Yaowu (1996), 15(2), 42-44
CODEN: ZHYAE8; ISSN: 1002-3461
PUBLISHER: Shandong Haiyang Yaowu Kexue Yanjiuso
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The changes of the hemorheol., plasma cholesterol and albumin and clin. effects in 36 children with refractory nephrosis after **treatment** with **polysaccharide sulfate** (PSS) were obsd. The indexes of hemorheol. and the plasma cholesterol decreased obviously and the albumin increased obviously compare to the control group. The results suggested that PSS might be used in the **anticoagulation** treatment of refractory nephrosis.

L7 ANSWER 7 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:762739 CAPLUS
DOCUMENT NUMBER: 126:84445
TITLE: Clinical and laboratory observation on **treating** acute cerebral infarction with propylene glycol mannurate **sulfate** (PGMS) and **polysaccharide sulfate**
AUTHOR(S): Han, Zhongyan; Teng, Jijun; Han, Qiang
CORPORATE SOURCE: Dep. Neurol., Qingdao Med. Coll., Tsingtao, 266033, Peop. Rep. China
SOURCE: Zhongguo Haiyang Yaowu (1996), 15(2), 38-41
CODEN: ZHYAE8; ISSN: 1002-3461
PUBLISHER: Shandong Haiyang Yaowu Kexue Yanjiuso
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB The therapeutic effect and lab. findings were studied in the patients of acute cerebral infarction **treated** with PGMS

and PSS (**polysaccharide sulfate**). The efficiency rate of PGMS group was better than that of PSS group, but there was no statistic significance. The lab. findings show that both of them had the effect of **anticoagulant** and decreasing blood viscosity and serum contents of lipids. There was no side effects in the PGMS group. The results suggest that PGMS is a prospective drug for treating acute cerebral infarction.

L7 ANSWER 8 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:657720 CAPLUS
DOCUMENT NUMBER: 125:316300
TITLE: A natural sulfated polysaccharide, calcium spirulan, isolated from Spirulina platensis: In vitro and ex vivo evaluation of anti-herpes simplex virus and anti-human immunodeficiency virus activities
AUTHOR(S): Hayashi, Kyoko; Hayashi, Toshimitsu; Kojima, Ichiro
CORPORATE SOURCE: Department Virology, Toyama Medical and Pharmaceutical University, Toyama, 930-01, Japan
SOURCE: AIDS Res. Hum. Retroviruses (1996), 12(15), 1463-1471
CODEN: ARHRE7; ISSN: 0889-2229
DOCUMENT TYPE: Journal
LANGUAGE: English
AB A sulfated polysaccharide named calcium spirulan (Ca-SP) has been isolated from a sea alga, Spirulina platensis, as an antiviral component. The anti-human immunodeficiency virus type 1 (HIV-1) and anti-herpes simplex virus type 1 (HSV-1) activities of Ca-SP were compared with those of dextran sulfate (DS) as a representative sulfated polysaccharide. Anti-HIV-1 activities of these agents were measured by three different assays: viability of acutely infected CD4-pos. cells, or a cytopathol. assay; detn. of HIV-1 p24 antigen released into culture supernatants; and inhibition of HIV-induced syncytium formation. Anti-HSV-1 activity was assessed by plaque yield redn. In addn., their effects on the blood **coagulation** processes and stability in the blood were evaluated. These data indicate that Ca-SP is a potent antiviral agent against both HIV-1 and HSV-1. Furthermore, Ca-SP is quite promising as an anti-HIV agent because even at low concns. of Ca-SP an enhancement of virus-induced syncytium formation was not obsd., as was obsd. in DS-treated cultures, Ca-SP had very low **anticoagulant** activity, and showed a much longer half-life in the blood of mice when compared with that of DS. Thus, Ca-SP can be a candidate agent for an anti-HIV **therapeutic** drug that might overcome the disadvantages obsd. in many **sulfated polysaccharides**. When the role of chelation of calcium ion with sulfate groups was examd. by removing calcium or its replacement by sodium, the presence of calcium ion in the mol. was

shown to be essential for the dose-dependent inhibition of cytopathic effect and syncytium formation induced by HIV-1.

L7 ANSWER 9 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:649633 CAPLUS
DOCUMENT NUMBER: 125:284919
TITLE: Non-animal polyanions for use in dermatology and cosmetics
INVENTOR(S): Facchini, Agostino
PATENT ASSIGNEE(S): Res Pharma S.R.L., Italy
SOURCE: Eur. Pat. Appl., 8 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 730867	A2	19960911	EP 1996-103360	19960305
EP 730867	A3	19970108		

R: BE, DE, ES, FR, IT, LU, NL, PT
PRIORITY APPLN. INFO.: IT 1995-MI458 19950309
AB The use of polyanions (**sulfated polysaccharides**; polydeoxyribonucleic acids) of non-animal origin for dermatol. and cosmetic **treatment** of the skin and for trichol. treatment, in particular of alopecia, is described. A capillary protective cream for the **treatment** of cellulitis and varicose veins contained vegetal **sulfated polysaccharides** 2 g, vegetal DNA 5 g, oil-in-water self-emulsifying base 25 g, preservatives (as needed), and water to 100 mL.

L7 ANSWER 10 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:217500 CAPLUS
TITLE: Analysis of acidic oligosaccharides and glycosaminoglycans.
AUTHOR(S): Linhardt, R. J.
CORPORATE SOURCE: College Pharmacy, University Iowa, Iowa City, IA, 52242, USA
SOURCE: Book of Abstracts, 211th ACS National Meeting, New Orleans, LA, March 24-28 (1996), CARB-059. American Chemical Society: Washington, D. C.
CODEN: 62PIAJ
DOCUMENT TYPE: Conference; Meeting Abstract
LANGUAGE: English
AB Glycosaminoglycans, and acidic oligosaccharides derived from these highly **sulfated** linear **polysaccharides**, have a variety of important biol. activities and **therapeutic** activities. Methods that have been developed for the analyses of

intact polysaccharides rely on high resoln. polyacrylamide gel and capillary electrophoresis. The major focus of our lab. is the glycosaminoglycan, heparin. Heparin is comprised of alternating, 1.fwdarw.4 linked, sulfated uronic acid and glucosamine residues. It is widely used as an **anticoagulant** drug and has a variety of important biol. roles. Oligosaccharides prepd. through controlled enzymic or chem. depolymn. can be conveniently analyzed by both electrophoresis and high performance liq. chromatog. Using these anal. methods the disaccharide compositional anal., oligosaccharide mapping and sequencing of glycosaminoglycans will be discussed.

L7 ANSWER 11 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:122625 CAPLUS
DOCUMENT NUMBER: 124:219965
TITLE: The effect of Salvia miltiorrhiza and polysaccharide sulfate on the adhesion of erythrocytes of the patient with cerebral thrombosis to cultured endothelial cells
AUTHOR(S): Wang, Ling; Huang, Xun; Ding, Zhaohua; Chen, Huaiqing; Peng, Rong; Yuan, Guanggu; Zhou, Dong
CORPORATE SOURCE: Biomedical Eng. Res. Unit, West China Univ. Medical Sci., Chengdu, 610041, Peop. Rep. China
SOURCE: Huaxi Yike Daxue Xuebao (1995), 26(4), 381-5
CODEN: HYDXET; ISSN: 0257-7712
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB In vitro expts. demonstrated that the no. and intensity of the adhesion of erythrocytes of patients with cerebral thrombosis to the cultured human umbilical vein endothelial cells were decreased after the **treatment** of erythrocytes with Salvia miltiorrhiza and **polysaccharide sulfate** in flow field. Polysaccharide sulfate was more effective in preventing adherence in common dose than S. miltiorrhiza.

L7 ANSWER 12 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:78052 CAPLUS
DOCUMENT NUMBER: 124:193809
TITLE: Study on the interaction between heparin and platelets
AUTHOR(S): Suda, Yasuo; Koshida, Shuhei; Kimura, Kazuhiro; Shiyama, Takaaki; Fukase, Koichi; Kusumoto, Shoichi; Yamada, Shuhei; Sugahara, Kazuyuki; Marques, Dalila; et al.
CORPORATE SOURCE: Faculity Science, Osaka Univ., Japan
SOURCE: Tennen Yuki Kagobutsu Toronkai Koen Yoshishu (1995), 37th, 259-64
CODEN: TYKYDS
DOCUMENT TYPE: Journal

LANGUAGE: Japanese

AB Heparin, a structurally heterogeneous and highly **sulfated polysaccharide**, is widely used in clin. **treatments** as an **anticoagulant**. Pharmaceutical heparin, however, is known to bind to human platelets, and may directly alter platelet function and induce immuno-sensitization. Toward the goals of developing heparins with safer therapeutic effects and developing a clearer understanding of the interaction between heparin and platelets at the mol. level, we examd. the structural specificity of heparin's binding to platelets and heparin-binding proteins on the surface of platelets.

L7 ANSWER 13 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:918400 CAPLUS
DOCUMENT NUMBER: 123:305850
TITLE: Novel pharmaceutical applications of polysaccharides
AUTHOR(S): Franz, Gerhard; Alban, Susanne; Kraus, Josef
CORPORATE SOURCE: Institut Pharmazie, Universitaet Regensburg, Regensburg, 93040, Germany
SOURCE: Macromol. Symp. (1995), 99(Functional Polysaccharides), 187-200
CODEN: MSYMEC; ISSN: 1022-1360
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review, with 34 refs. The role of chem. characterized polysaccharides is discussed in view of their immunostimulating activities. A possible correlation of fungal .beta.-1,3/1,6-glucans differing in the branching pattern is demonstrated with in vivo tumor models. In a second part, the possible role of sulfated polysaccharide structures as **anticoagulating** compds. is again correlated with polysaccharide structures and sulfate substitution pattern of these biopolymer derivs.

L7 ANSWER 14 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1995:354651 CAPLUS
DOCUMENT NUMBER: 122:123161
TITLE: Sulfated polysaccharides as inhibitors of smooth muscle cell proliferation
INVENTOR(S): Conrad, H. Edward; Fugedi, Peter; Brandley, Brian K.; Lam, Lun H.; Laine, Roger A.
PATENT ASSIGNEE(S): Glycomed, Inc., USA
SOURCE: U.S., 29 pp. Cont.-in-part of U.S. Ser. No. 686,540, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 4
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5380716	A	19950110	US 1992-996894	19921228
US 5032679	A	19910716	US 1989-400661	19890831
WO 9414849	A1	19940707	WO 1993-US11360	19931122
W: AU, CA, JP, NO				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9456169	A1	19940719	AU 1994-56169	19931122
PRIORITY APPLN. INFO.:			US 1988-285546	19881215
			US 1989-400661	19890831
			US 1991-686540	19910417
			US 1992-996894	19921228
			WO 1993-US11360	19931122

AB Highly sulfated oligosaccharides in the form of hexasaccharide and octasaccharide compds. which have antiproliferative activity with respect to smooth muscle cells are disclosed which are useful in treatment of conditions characterized by unwanted smooth muscle cell proliferation such as a result of trauma or disease states, e.g. asthma, congestive heart failure, and hypertension. The oligosaccharides have increased ability to inhibit the proliferation of smooth muscle cells and decreased ability to act as an **anticoagulant** as compared with com. heparin and/or unsepd. fragments of heparin. Prepn. and sepn. of oligosaccharide fragments of heparin are described, as is the effect of oligosaccharide fractions on smooth muscle cell proliferation.

L7 ANSWER 15 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1994:14923 CAPLUS
DOCUMENT NUMBER: 120:14923
TITLE: Pharmaceutical compositions containing alginates and metal salts
INVENTOR(S): Sentsova, Tatyana Nikolaevna; Yakubovich, Viktor Semenovich; Raskina, Ljudmila Pavlovna; Barabanov, Valery Alexandrovich; Ilchenko, Anatoly Afanasievich; Zhukhovitsky, Vladimir G.; Mikelson, Yanis Martynovich; Loginov, Anatoly Sergeevich; Melnichenko, Nadezhda T.; et al.
PATENT ASSIGNEE(S): Vsesojuzny Nauchno-Issledovatelsky Institut Meditsinskikh Polimerov, Russia
SOURCE: PCT Int. Appl., 28 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9320826	A1	19931028	WO 1992-RU74	19920410
W: DE, GB, HU, JP, NL				
NL 9220019	A	19940405	NL 1992-20019	19920410
DE 4294862	T	19940609	DE 1992-4294862	19920410
JP 06508641	T2	19940929	JP 1992-518208	19920410
GB 2272375	A1	19940518	GB 1993-25480	19931210
GB 2272375	B2	19960214		
PRIORITY APPLN. INFO.:			WO 1992-RU74	19920410

AB Pharmaceutical formulations of alginic acid or its pharmaceutically acceptable salts 5-91% and metal salts as the balance are described for prophylaxis and treatment of gastrointestinal disease, **wound** healing, and as hemostatic agents. Metals salts used include iron ammonium alum, iron glycerophosphate, iron lactate, reduced iron, base bismuth nitrate, potash alum, aluminum hydroxide, kaolin, barium sulfate, calcium gluconate, calcium chloride or calcium carbonate, optionally alone or in mixts. A 17 yr old with an ulcer 0.6.times.0.6 cm in the duodenal bulb was treated with aerosols of bismuth nitrate 0.2 g in six sessions. Mucous membrane biopsies and endoscopy showed improvement of the ulcer.

L7 ANSWER 16 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:503325 CAPLUS
DOCUMENT NUMBER: 119:103325
TITLE: Treatment of **wounds**, scars, and keloids with glycosaminoglycans
INVENTOR(S): Reinmueller, Johannes
PATENT ASSIGNEE(S): Germany
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9312801	A1	19930708	WO 1992-EP2990	19921224
W: JP, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 4200080	A1	19930930	DE 1992-4200080	19920103
EP 619737	A1	19941019	EP 1993-901754	19921224
EP 619737	B1	19990317		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 177640	E	19990415	AT 1993-901754	19921224
US 5731298	A	19980324	US 1994-256040	19940815
PRIORITY APPLN. INFO.:			DE 1992-4200080	19920103

Searcher : Shears 308-4994

WO 1992-EP2990 19921224

AB Crosslinked glycosaminoglycans, such as heparin, **hyaluronic** acid, and chondroitin **sulfate** are nontopical agents for the **treatment** of **wounds**, scars and keloids. The glycans are preferably formulated as injectable gels. Use of the glycans avoids the side effects assocd. with the conventional corticoid drugs.

L7 ANSWER 17 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1993:198276 CAPLUS
DOCUMENT NUMBER: 118:198276
TITLE: Medicament-coated refractive anterior chamber ocular implant
INVENTOR(S): Galin, Miles A.; Salamone, Joseph C.; Israel, Stanley C.
PATENT ASSIGNEE(S): USA
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9303776	A1	19930304	WO 1992-US6818	19920813
W: AU, BR, CA, JP, SE, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
AU 9225136	A1	19930316	AU 1992-25136	19920813
AU 664858	B2	19951207		
EP 601055	A1	19940615	EP 1992-918851	19920813
EP 601055	B1	20000607		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, SE				
BR 9206365	A	19941011	BR 1992-6365	19920813
AT 193654	E	20000615	AT 1992-918851	19920813
US 5652014	A	19970729	US 1994-193160	19940825
PRIORITY APPLN. INFO.:			US 1991-745927	19910816
			WO 1992-US6818	19920813

AB A minus power anterior chamber ocular implant for placement in the anterior chamber of a phakic eye having an anat. lens in situ comprises (1) a neg. artificial refracting lens having at least one concave surface coated with sulfated polysaccharide, such as heparin and (2) means for positioning the artificial lens in the anterior chamber of the eye to prevent contact between the implant and the anatomical lens. The implant compensates for refractive errors or creates a specific refraction to assist in visual function and has increased biocompatibility, thereby preventing detrimental effects typically assocd. with the implantation of an uncoated refractive

anterior chamber implant in the eye. A method of prepg. such a minus power implant comprises first exposing an uncoated implant to a plasma to generate a plasma-treated implant having a surface contg. amines, carboxylic acids, active free radicals or passive free radicals, and thereafter bonding the polysaccharides to the surface. Myopia is treated by surgically implanting and anchoring the implant in the phakic eye.

L7 ANSWER 18 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1992:604849 CAPLUS
DOCUMENT NUMBER: 117:204849
TITLE: Effect of polysaccharide sulfate on plasma concentrations of TXB2 and 6-keto-PGF1.alpha. in patients with cardiovascular diseases
AUTHOR(S): Du, Yu; Liu, Hongmin; Xu, Jingming; Gao, Xia; Wang, Yuanchao
CORPORATE SOURCE: PLA 88 Mil. Hosp., Taian, 271000, Peop. Rep. China
SOURCE: Zhongguo Haiyang Yaowu (1992), 11(1), 15-6
CODEN: ZHYAE8
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Thirty one patients with cardiovascular diseases were **treated** with PSS (**polysaccharide sulfate**) tablets 100 mg, tid, orally, for 30 days as a course. The plasma concns. of TXB2 and 6-keto-PGF1.alpha. were measured before and after the therapy, and the effects of PSS on the concns. of HDL-cholesterol, LDL-cholesterol as well as bleeding time and prothrombing time were also obsd. PSS had a significant efficacy in reducing TXB2 concn., but had no effect on increasing 6-keto-PGF1.alpha.. There was a remarkable difference in the ratio of the plasma TXB2/6-keto-PGF1.alpha. before and after the therapy. PSS had an efficacy in reducing LDL-cholesterol level, but no effect in increasing HDL-cholesterol level. PSS had no effect on bleeding time or prothrombin time. The authors consider that PSS is a reliable drug in preventing and treating atherosclerosis without any adverse reactions.

L7 ANSWER 19 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1991:150158 CAPLUS
DOCUMENT NUMBER: 114:150158
TITLE: Extraction of sulfated polysaccharides and their salts free sea cucumber, and pharmaceuticals containing the sulfated polysaccharides
INVENTOR(S): Fan, Hui Zeng; Yu, Song; Yamanaka, Etsuji; Numata, Kazuhiro; Oka, Toshinori; Suzuki, Norihiko; Muranaka, Yoshiyuki
PATENT ASSIGNEE(S): Taiho Pharmaceutical Co., Ltd., Japan; Kotai Kasei Co., Ltd.

SOURCE: PCT Int. Appl., 42 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9008784	A1	19900809	WO 1990-JP141	19900206
W: AU, CA, JP, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE				
CA 2026992	AA	19900807	CA 1990-2026992	19900206
CA 2026992	C	19981110		
AU 9050325	A1	19900824	AU 1990-50325	19900206
AU 634521	B2	19930225		
EP 408770	A1	19910123	EP 1990-902694	19900206
EP 408770	B1	19960605		
R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE				
AT 138938	E	19960615	AT 1990-902694	19900206
ES 2087907	T3	19960801	ES 1990-902694	19900206
DD 297165	A5	19920102	DD 1990-343252	19900806
KR 9700528	B1	19970113	KR 1990-72212	19901006
US 5519010	A	19960521	US 1994-241667	19940512
PRIORITY APPLN. INFO.:			JP 1989-28299	19890206
			WO 1990-JP141	19900206
			US 1990-582174	19900920
			US 1991-746656	19910808

AB A sulfated polysaccharide having heparin-like activity is isolated from sea cucumber (Stichopus japonicus) and used for treatment of disseminated intravascular **coagulation**. The sulfated polysaccharide is a white hygroscopic powder, sol. in water, but insol. in EtOH and Me2CO. The isolation method involves: alkali hydrolysis of sea cucumber, treatment with protein-hydrolyzing enzyme, chromatog., etc. Pharmaceutical formulations are presented. **Anticoagulation** activity of the prepn. was tested.

L7 ANSWER 20 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1991:69045 CAPLUS
DOCUMENT NUMBER: 114:69045
TITLE: Preparation of **therapeutic** propyl mannuronate sodium **sulfate** from sodium **alginate**
INVENTOR(S): Guan, Huashi
PATENT ASSIGNEE(S): Qingdao Marine University, Peop. Rep. China
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 6 pp.
CODEN: CNXXEV
DOCUMENT TYPE: Patent

LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1042361	A	19900523	CN 1988-109698	19881030
CN 1030454	B	19951206		

AB Na alginate is hydrolyzed, esterified with propylene oxide, and sulfonated to give therapeutic Pr mannuronate Na sulfate. The esterification with propylene oxide is performed at 50-80.degree. and 1.5-3 kg/cm2 in the presence of NaOH. The resultant Pr mannuronate is sulfonated to give a product which is adjusted to pH 8 with NaOH. The prepn. may be used as an antithrombotic, hypolipemic, or ischemic cardiovascular disease-treating agent (no data).

L7 ANSWER 21 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1990:407 CAPLUS
DOCUMENT NUMBER: 112:407
TITLE: Inhibition of allergic encephalomyelitis in rats by **treatment** with **sulfated polysaccharides**
AUTHOR(S): Willenborg, David O.; Parish, Christopher R.
CORPORATE SOURCE: Neurosci. Res. Unit, R. Canberra Hosp., Canberra, 2601, Australia
SOURCE: J. Immunol. (1988), 140(10), 3401-5
CODEN: JOIMA3; ISSN: 0022-1767
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Sulfated polysaccharides were tested for their ability to inhibit passive spleen cell-induced exptl. allergic encephalomyelitis (EAE) in rats. Heparin and fucoidan both completely inhibited passive EAE even when treatment was begun 3 days after the transfer of cells. Pentosan sulfate was partially inhibitory whereas chondroitin-4-sulfate had no effect. The inhibition was not merely due to killing of the cells since active sensitization 14 days after cell transfer resulted in an early onset of disease indicating the persistence of transferred cells as memory cells. Although all the inhibitory polysaccharides are **anticoagulants**, this function alone is not the reason for inhibition since a heparin prepn. devoid of **anticoagulant** activity also partially inhibited EAE. Actively induced EAE was also delayed by treatment with heparin. The results are discussed in terms of the polysaccharides inhibiting the enzymic-dependent movement of lymphocytes across the central nervous system vascular endothelium.

L7 ANSWER 22 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1989:551087 CAPLUS

DOCUMENT NUMBER: 111:151087
TITLE: Activation of human protein C by blood **coagulation** factor Xa in the presence of anionic phospholipids. Enhancement by sulfated polysaccharides
AUTHOR(S): Freyssinet, Jean Marie; Wiesel, Marie Louise; Grunebaum, Lelia; Pereillo, Jean Marie; Gauchy, Josiane; Schuhler, Simone; Freund, Genevieve; Cazenave, Jean Pierre
CORPORATE SOURCE: Serv. Hemostase Thromb., Cent. Reg. Transfus. Sanguine, Strasbourg, F-67085, Fr.
SOURCE: Biochem. J. (1989), 261(2), 341-8
CODEN: BIJOAK; ISSN: 0306-3275
DOCUMENT TYPE: Journal
LANGUAGE: English

AB In the presence of hirudin, the most potent known inhibitor of thrombin, human protein C can be activated by human factor Xa (20 nM), but by a thrombomodulin-independent mechanism requiring only the presence of Ca2+ and phospholipid vesicles bearing a high proportion of neg. charge (30-75% phosphatidylserine, depending on the conditions). At an optimal concn. of phosphatidylserine/phosphatidylcholine (1:1, wt./wt.) of 75 .mu.M, the apparent Km was 1 .mu.M with a kcat of 1 min-1. At 25 .mu.M the d. of neg. charges by the adjunction of sulfated polysaccharides, like pentosan polysulfate or std. heparin at optimal concns. of 2-5 .mu.g/mL and 5-10 .mu.g/mL resp., resulted in a 4-protein C activation by factor Xa. In any case, the presence of Ca2+ was essential, the dependence being sigmoidal with Hill coeffs. ranging 1.4-2.0. No significant activation of 4-carboxyglutamic acid-domainless protein C, a chymotryptic deriv. lacking the phospholipid-binding domain, could be detected in the presence of phospholipids and Ca2+, with or without pentosan polysulfate. In a large molar excess, other phospholipid-binding entities like prothrombin fragments F1 or F1+2 could inhibit protein C activation by factor Xa, but pentosan polysulfated exerted a clear protective effect. Factor Xa irreversibly inhibited at its active center, but not di-iso-Pr phosphoro-thrombin, behaved as an inhibitor but in a more complex manner than simple Michaelis-Menten kinetics. Among several derivs. of pentosan polysulfated or of heparin which were tested, those having the higher degree of sulfation and (or) mol. mass were the most efficient in enhancing the rate of activation of protein C by factor Xa in the presence of phospholipids. Thus, human factor Xa, at physiol. concns., could activate human protein C in the presence of anionic phospholipids, and this activation could be potentiated by **therapeutic** concns. of **sulfated polysaccharides**.

L7 ANSWER 23 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1989:82475 CAPLUS

DOCUMENT NUMBER: 110:82475
TITLE: **Sulfated polysaccharides** (FGAG) as **anticoagulants** for **treatment** of disseminated intravascular **coagulation**
INVENTOR(S): Han, Kaikai; U. Sho; Chin, Kikutei; Kiritani, Masayuki; Minami, Yoshinori; Muranaka, Yoshiyuki
PATENT ASSIGNEE(S): Taiho Pharmaceutical Co., Ltd., Japan; Kotai Kasei Kogyo K. K.
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 63128001	A2	19880531	JP 1986-277461	19861119

AB FGAG and their salts having potent **anticoagulant** activities are prepd. for the treatment of disseminated intravascular **coagulation** (DIC). Dried sea cucumbers (Stickopus japonicus) (1 kg) were soaked in H2O, homogenized, treated with pancreatin, and centrifuged. The supernatant was treated with EtOH, and a ppt. (polysaccharides) produced was isolated, discolored with a H2O2 soln., and subjected to a refining process to give 17 g of FGAG K salt. The inhibitory action of FGAG K salt on blood platelet aggregation induced by thrombin was demonstrated in a Tris-HCl buffer (pH 7.8) contg. 200 .mu.L human plasma incubated with 15 .mu.L thrombin and 0.5 mg FGAG K salt. FGAG K salt was dissolved in H2O, placed in vials (50 mg FGAG K salt/vial), freeze-dried, and dissolved in 2 mL saline immediately before injection.

L7 ANSWER 24 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1988:210169 CAPLUS
DOCUMENT NUMBER: 108:210169
TITLE: Topical pharmaceutical containing the extract (protoexoplasma) of red algae for the treatment of leg circulation disorders
INVENTOR(S): Herve, Rene; Percehais, Serge; Yvin, Jean Claude
PATENT ASSIGNEE(S): Goemar Laboratories S. A., Fr.
SOURCE: Fr. Demande, 11 pp.
CODEN: FRXXBL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
FR 2593067	A1	19870724	FR 1986-638	19860117
FR 2593067	B1	19890203		

AB The ext. (protoexoplasma) of red algae (GYFC8) is formulated in an emulsion and contains 1-5% by wt. sulfurylated polysaccharides. Delesseria sanquinea Were lysed by liq. N at -50.degree., ground at -20.degree., ultracentrifuged, and the supernatant was recovered after ultrafiltration; the ext. (GFCY8) contained 3.6% by wt. sulfurylated polysaccharides. An ointment contained hesperidine heterosides 1, red algae ext. GYFL (French Patent 2287943) 4, red algae ext. GYFC8 10 and emulsion excipient to 100 g. In humans treated twice daily topically with 5 g of this ointment for 15 days, considerable relief was obtained: the internal pressure in the calf and ankle was greatly decreased, the sensation of heaviness was diminished, and sleep, which had been perturbed by leg discomfort, was more comfortable.

L7 ANSWER 25 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1987:125427 CAPLUS
DOCUMENT NUMBER: 106:125427
TITLE: Treating wastewater from sulfate pulp production
INVENTOR(S): Rusetskaya, G. D.; Timofeeva, S. S.; Burshtein, N. G.; Kukharev, B. F.; Stankevich, V. K.; Terent'eva, V. P.
PATENT ASSIGNEE(S): Irkutsk Polytechnic Institute, USSR; Irkutsk Institute of Organic Chemistry
SOURCE: U.S.S.R. From: Otkrytiya, Izobret. 1986, (42), 83.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1270121	A1	19861115	SU 1985-3873222	19850325

AB Title wastewaters are treated with a **coagulant**, a cationic agent, and finally undergo flotation treatment. To increase removals, a polyvinyl ether of a N-alkylethanol-amine hydrobromide of formula (CH2CH)nOCH2CH2NHR.cntdot.HBr (n = 6-8, R = C12H24 or C16H32 is used as cationic reagent.

IT **9004-34-6P**
RL: IMF (Industrial manufacture); PREP (Preparation)
(pulp, **sulfate**, wastewater from manuf. of, **coagulation** and cationic reagent **treatment** and flotation of, alkylethanolamine hydrobromide polyvinyl ethers in)

L7 ANSWER 26 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1986:520138 CAPLUS
DOCUMENT NUMBER: 105:120138
TITLE: Study of the efficiency of Makroflok cationic flocculants in sludge dewatering
AUTHOR(S): Popov, Kh.
CORPORATE SOURCE: Bulg.
SOURCE: Tr. Vodosnabdyavane, Kanaliz. Sanit. Tekh. (1984), 17(2), 81-100
CODEN: TVKTDQ; ISSN: 0204-7020
DOCUMENT TYPE: Journal
LANGUAGE: Bulgarian
AB The effectiveness of the nontoxic cationic flocculants Makroflok FM-10/S (I) [80455-67-0], AATFM [77465-97-5], AATM [104075-10-7], AATK [104075-09-4], and AATFK [77465-96-4] is examd. in relation to the dewatering of sludges from **treatment** of wastewaters from textile, leather, and **sulfate cellulose** prodn., as well as from pig farms and wood-fiberboard prodn. Most effective was the AATFM flocculant which was as effective as, and in some cases even superior to, Zetag 92. I is efficient when used together with mineral **coagulants** for sludge dewatering. Its use considerably decreases the **coagulant** dose.

L7 ANSWER 27 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1986:132 CAPLUS
DOCUMENT NUMBER: 104:132
TITLE: The measurement of heparin and other **therapeutic sulfated polysaccharides** in plasma, serum and urine
AUTHOR(S): Dawes, J.; Prowse, C. V.; Pepper, D. S.
CORPORATE SOURCE: Blood Compon. Assay Group, MRC/SNBTS, Edinburgh, EH1 2QW, UK
SOURCE: Thromb. Haemostasis (1985), 54(3), 630-4
CODEN: THHADQ; ISSN: 0340-6245
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The competitive binding assay described will specifically and accurately measure concns. of administered heparin [9005-49-6] in biol. fluids with a sensitivity of 60 ng/mL. Neither endogenous glycosaminoglycans, nor plasma proteins such as ATIII and PF4 interfere in the assay. Semi-synthetic highly sulfated heparinoids and low mol. wt. heparin can also be measured. Using this assay heparin clearance followed simple 1st-order kinetics over the dose range 100-5,000 units, but the half-life was strongly dose-dependent. There was good correlation with heparin activity measurements by APTT and anti-Xa **clotting** assays. Plasma concns. were measurable for at least 5 h following s.c. injection of 10,000 units of heparin. Excretion in the urine could be followed

after all but the lowest i.v. dose. This assay, used in conjunction with measurements of heparin **anticoagulant** activity, will be valuable in the elucidation of mechanisms of action of heparin and the heparinoids, and in the assessment and management of problems related to heparin therapy.

L7 ANSWER 28 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1985:137203 CAPLUS
DOCUMENT NUMBER: 102:137203
TITLE: Electroflotation-**electrocoagulation** treatment of wastewater generated in the production of sulfate pulp
AUTHOR(S): Tabakov, D.
CORPORATE SOURCE: Bulg.
SOURCE: Nauchni Tr. - Plovdivski Univ. (1983), 21(3), 263-71
CODEN: NTPUB6; ISSN: 0369-6227
DOCUMENT TYPE: Journal
LANGUAGE: Bulgarian
AB Electroflotation-**electrocoagulation** proved effective for treating wastewaters from sulfate pulp manuf. An increase in anode c.d. significantly increases the removal effectiveness for total O demand, COD, and BOD. Several treatment schemes are presented.

L7 ANSWER 29 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1983:162682 CAPLUS
DOCUMENT NUMBER: 98:162682
TITLE: Water-soluble linear polysaccharide with **anticoagulating** activity
INVENTOR(S): Gal'braikh, L. S.; Barsova, L. I.; Vikhoreva, G. A.; Noreika, R. M.; Sher, A. I.
PATENT ASSIGNEE(S): Moscow Textile Institute, USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1982, (46), 117.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 981322	A1	19821215	SU 1981-3310928	19810508

AB Title polysaccharide is produced by **treating** **polysaccharide** with a **sulfating** agent in DMF. In prepg. the title material by **treating** a **polysaccharide** with a **sulfating** agent in DMF, the **anticoagulation** activity is increased and the prodn. is simplified by using carboxymethylcellulose (I) [9004-32-4] as the

polysaccharide and chlorosulfonic acid (II) [7790-94-5] as the sulfating agent with treatment for 0.5-1.0 h in a 16.0-29.4% soln. of DMF at soln.-I ratio 15.5-18.8:1 and 20-25.degree..

L7 ANSWER 30 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1982:533577 CAPLUS
DOCUMENT NUMBER: 97:133577
TITLE: Cellulose sulfate salt having **anticoagulating** action
INVENTOR(S): Okajima, Kunihiko; Kamide, Kenji; Matsui, Toshihiko
PATENT ASSIGNEE(S): Asahi Chemical Industry Co., Ltd., Japan
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 53473	A1	19820609	EP 1981-305569	19811125
EP 53473	B1	19850717		
R: DE, FR, GB, SE				
JP 57090002	A2	19820604	JP 1980-165786	19801127
JP 63056242	B4	19881107		
CA 1176631	A1	19841023	CA 1981-390539	19811120
US 4389523	A	19830621	US 1981-324918	19811125
AU 8177912	A1	19820715	AU 1981-77912	19811126
AU 529691	B2	19830616		
PRIORITY APPLN. INFO.:			JP 1980-165786	19801127

AB The reaction of cellulose with SO3-amine or -amide complexes at -10 to 40.degree., neutralizing, and dialysis gave cellulose sulfate salts with total substitution degree (SD) of 0.8-2.6, which is the sum of substitution at C2, C3 and C6 of glucopyranose ring, and heparinic action. Thus, a mixt. of 10.0 g cotton in 10.0 mL DMF was compressed for 10 min, treated with 56.0 g SO3-DMF compd. (1:2), stirred for 1 h at 25.degree., subjected to SD-adjusting **treatment**, and neutralized with NaOH to give crude sodium **cellulose sulfate** (I) [9005-22-5]. Dissoln. of I in H2O, treatment with kieselguhr, and dialysis gave I with total SD 2.58, C2, C3 and C6 SD 1.00, 0.94 and 0.64, resp., limiting viscosity 220 cm3/g, **coagulation** retention ratio 100 after 1 wk, and pH 5.7.

L7 ANSWER 31 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1982:498395 CAPLUS
DOCUMENT NUMBER: 97:98395
TITLE: **Anticoagulant** materials

PATENT ASSIGNEE(S): Asahi Medical K. K., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57069859	A2	19820428	JP 1980-145642	19801020
JP 63050020	B4	19881006		

AB Aminopolysaccharide sulfates (esp. aminodeoxycellulose sulfate) are immobilized on base materials (such as sutures, artificial blood vessels, blood sampling tubes, etc.) to form **anticoagulant** materials. Thus, the inner wall of test tubes (10 .times. 75 mm) was coated with a soln. contg. 2 mg aminopolysaccharide sulfates (6-amino-6-deoxycellulose sulfate Na salt [76559-83-6], 2-amino-2-deoxycellulose sulfate Na salt [76559-82-5], 6-amino-6-deoxystarch sulfate Na salt) and 5% HCHO, and treated tubes were dried at 80.degree. under vacuum for 1 h. The **coagulation** time of fresh dog blood in treated tubes was >90 min, compared to 2.7 min for untreated controls.

L7 ANSWER 32 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1979:545545 CAPLUS
DOCUMENT NUMBER: 91:145545
TITLE: Investigations on advanced methods of sulfate-pulping wastewater treatment
AUTHOR(S): Apolinarski, M.; Roman, M.
CORPORATE SOURCE: Inst. Zaopatrzenia Wode Budownictwa Wodnego, Politech. Warszawska, Warsaw, Pol.
SOURCE: Wysokoefektywne Metody Oczyszczania Sciekow, Mater. Miedzynar. Konf. Nauk. (1978), Volume 2, 505-18. Politech. Krakowska im. Tadeusza Kosciuszki: Krakow, Pol.
CODEN: 40UJAD
DOCUMENT TYPE: Conference
LANGUAGE: Polish

AB Methods of treatment of wastewater from SO42- pulping treatment were investigated. The conventional method of mech.-biol. treatment with activated sludge, mech.-biol. treatment with activated sludge followed by FeSO4 **coagulation**, simultaneous application of activated sludge and **coagulation** with Al2(SO4)3, and mech.-chem.-biol. treatment: **coagulation** with lime, CO2 satn., and activated sludge treatment were compared. The highest removals of BOD5 (93%), COD (83%) and color (90%) are obtained with the last method.

L7 ANSWER 33 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1978:38898 CAPLUS
DOCUMENT NUMBER: 88:38898
TITLE: Viscose fibers
INVENTOR(S): Maiboroda, V. I.; Mikhailov, N. V.; Mironova, E. A.; Rodionova, I. N.; Balandina, I. N.
PATENT ASSIGNEE(S): USSR
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1977, 54(39), 221. CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 99993	T	19771025	SU 1953-449299	19531126

AB In the prodn. of viscose fibers by formation in a bicarbonate **coagulation** bath, the regeneration of cellulose is accelerated when the xanthate fibers, after drawing, are treated with Na2SO4 contg. NaOH during 30-60 min at 95-100.degree. or 120-30.degree. at 2-3 atm.

L7 ANSWER 34 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1978:11463 CAPLUS
DOCUMENT NUMBER: 88:11463
TITLE: Study of the composition and chemical purification of waste waters from cotton cellulose production
AUTHOR(S): Voronov, Yu. V.; Kulikov, V. P.; Koren'kov, V. N.; Salomeev, V. P.
CORPORATE SOURCE: USSR
SOURCE: Sb. Tr. - Mosk. Inzh.-Stroit. Inst. (1975), 110, 92-5
CODEN: SISKA2
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB Various **coagulants** for the title wastewaters were tried. Al2(SO4)3 is best but all the **coagulants** produce a large quantity of sludge which is difficult to handle. Biol. purifn. offers promise and studies have begun on this process.

L7 ANSWER 35 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1977:458511 CAPLUS
DOCUMENT NUMBER: 87:58511
TITLE: Pharmaceutical composition containing a plasminogen activator
INVENTOR(S): Dussourd d'Hinterland, Lucien; Pradayrol,

Lucien; Durand, Jacques; Normier, Gerard
PATENT ASSIGNEE(S): Fabre, Pierre, S. A., Fr.
SOURCE: Ger. Offen., 21 pp. Addn. to Ger. Offen. 2,456,589.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2619667	A1	19761118	DE 1976-2619667	19760504
DE 2619667	C2	19841206		
FR 2310133	A2	19761203	FR 1975-13932	19750505
FR 2310133	B2	19781201		
BE 841251	A4	19761028	BE 1976-166547	19760428
ES 447803	A2	19770701	ES 1976-447803	19760505
GB 1551275	A	19790830	GB 1976-18369	19760505
CH 627783	A	19820129	CH 1974-15815	19780101

PRIORITY APPLN. INFO.: FR 1975-13932 19750505

AB A complex and or a simple mixt. of a plasminogen [9001-91-6] activator and a **sulfated polysaccharide**, preferably K dextran **sulfate** [39422-86-1] is prepd. for use in **treatment** of various circulatory diseases, esp. thrombosis. For example, acetone powd. swine ovaries were prepd. and the protein was pptd. by (NH4)2SO4 fractionation. The fractions were tested for fibrinolytic activity and for protein content. The active protein fraction, contg. the plasminogen activator, was suspended in phosphate buffer soln., clarified, and combined with dextran sulfate soln. at pH 5.8-5.9. The complex pptd. after 30 min at 4.degree., and was isolated by centrifugation, then dissolved in a buffer soln. at pH 7-7.5, and finally lyophilized. A dose of 10 mg active fraction/kg complexed with 2 mg dextran sulfate/kg showed twice the plasminogen-activating activity in rat blood **clots** of the uncomplexed activator alone.

L7 ANSWER 36 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1976:425068 CAPLUS
DOCUMENT NUMBER: 85:25068
TITLE: Process for the operations control of the chemical purification of waste waters
AUTHOR(S): Alesina, I. G.; Krunchak, M. M.; Semenov, V. P.; Ponizovskii, V. Z.; Milagin, A. F.; Makarov, V. F.
CORPORATE SOURCE: Vses. Nauchno-proizvod. Ob'edin. Bum. Prom., USSR
SOURCE: Bum. Prom-st. (1976), (1), 22-3
CODEN: BUMPAK

DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The dose of Al2(SO4)3 [10043-01-3] required for **coagulation** of lignin [9005-53-2] from biol.-purified sulfate pulping waste water depended on the alky. and coloration of the treated water. Redn. of alky. with H2SO4 allowed to calc. the optimum dose of Al2(SO4)3 as a function of coloration (i.e. lignin concn.) of the treated water.

L7 ANSWER 37 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1974:537750 CAPLUS
DOCUMENT NUMBER: 81:137750
TITLE: Solvation of cellulose by the action of nitrogen tetraoxide in N,N-dimethylformamide
AUTHOR(S): Pasteka, Mikulas; Mislovicova, Danica
CORPORATE SOURCE: Inst. Chem., Slovak Acad. Sci., Bratislava, Czech.
SOURCE: Cellul. Chem. Technol. (1974), 8(2), 107-14
CODEN: CECTAH
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The solvation of sulfate cellulose pulp in DMF with N2O4 [10544-72-6] was accompanied by depolymn. Beech **sulfate cellulose** (d.p. 623) when **treated** for 2 hr at room temp. in DMF with N2O4 (cellulose-N2O4 ratio = 1:20), its d.p. decreased to 520. A further decrease in d.p. was obsd. when using DMF contg. H2O. Cotton linters showed the highest d.p. decrease while beech sulfate cellulose gave the lowest. A 1% cellulose nitrite [9062-23-1] soln. in DMF when **coagulated** in EtOH or H2O, formed a fine dispersed ppt.; solns. contg. >2% or <5% cellulose nitrite formed a diform gel-state material. The min. decrease of d.p. was obsd. following **coagulation** in EtOH, H2O, and NaCl soln.

L7 ANSWER 38 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1968:458260 CAPLUS
DOCUMENT NUMBER: 69:58260
TITLE: Some pharmacodynamic properties of cellulose sulfate, a kininogen-depleting agent in the rat
AUTHOR(S): Rothschild, A. M.
CORPORATE SOURCE: Fac. Med. Ribeirao Preto, Univ. Sao Paulo, Ribeirao Preto, Brazil
SOURCE: Brit. J. Pharmacol. Chemother. (1968), 33(3), 501-12
CODEN: BJPCAL
DOCUMENT TYPE: Journal
LANGUAGE: English
AB I.v. administered cellulose sulfate (I) caused hypotension in the rat, which was accompanied by a marked fall of plasma kininogen (II)

and seemed to be due to the release of bradykinin. The hypotension was absent in rats pretreated with the cryst. trypsin inhibitor from soybeans, but occurred in animals pretreated with a histamine antagonist. I failed to release histamine from the perfused hindquarters of the rat. The depletion of plasma II caused by I was accompanied by a marked but short-lasting elevation of the esterolytic action of the treated animal's blood on benzoylarginine ethyl ester, by moderate leukocytosis, but not by changes in blood platelet, plasma protein, or hematocrit values. The **anticoagulant** effect of I was only noticeable in the blood of rats receiving doses of polysaccharide at least 3 times higher than those required to induce extensive plasma II depletion. Fibrinolytic activity could be demonstrated in the plasma of rats receiving I. The apparent interference of excess of sulfopolysaccharide on components of the fibrinolysis assay system could be overcome by Polybrene, a polymeric quaternary ammonium salt. 26 references.

L7 ANSWER 39 OF 39 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1968:117133 CAPLUS
DOCUMENT NUMBER: 68:117133
TITLE: Antilipemic and antiatherosclerotic compounds
INVENTOR(S): Gros, Pierre
SOURCE: Belg., 6 pp.
CODEN: BEXXAL
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 640464		19640316		
PRIORITY APPLN. INFO.:			FR	19621128

AB Metal derivs. of sulfated polysaccharides of the carrageen type isolated from seaweed, esp. Chondrus ocellatus, show activity in prevention and treatment of lipemia and atherosclerosis. The compds. have general formula (MSO4.C6H9O4]n (where M is a metallic ion). The seaweed was treated first with acid then with an alk. soln. Centrifugation gave an alk. soln. from which the carraghenin (I) was recovered as a **coagulate** by treatment with CaCl2. Treatment of I in H2O with Na3PO4 or Na2HPO4, filtration, and neutralization of the filtrate gave after evapn. or addn. of EtOH the polysaccharide sulfate. After daily doses of 2 g. of the sulfate for 6 days, hyperlipemic rats were found to possess greatly reduced serum cholesterol levels. Doses of 4 g. daily in divided doses of 1 g. for 6 days reduced total lipids in serum from 12-18 g./l. serum to 9-11 g./l. serum.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 15:16:16 ON 14 AUG 2000)
L8 64 S L7
L9 39 DUP REM L8 (25 DUPLICATES REMOVED)

L9 ANSWER 1 OF 39 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 2000:375979 SCISEARCH
THE GENUINE ARTICLE: 313EZ
TITLE: Micropattern immobilization of polysaccharide
AUTHOR: Ito Y (Reprint)
CORPORATE SOURCE: UNIV TOKUSHIMA, FAC ENGN, DEPT BIOL SCI & TECHNOL, TOKUSHIMA 7708506, JAPAN (Reprint); JST, PRESTO, SEIKA 6190237, JAPAN
COUNTRY OF AUTHOR: JAPAN
SOURCE: JOURNAL OF INORGANIC BIOCHEMISTRY, (APR 2000) Vol. 79, No. 1-4, pp. 77-81.
Publisher: ELSEVIER SCIENCE INC, 655 AVENUE OF THE AMERICAS, NEW YORK, NY 10010.
ISSN: 0162-0134.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS; LIFE
LANGUAGE: English
REFERENCE COUNT: 25
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Two types of polysaccharides, sulfated hyaluronic acid and heparin, were pattern-immobilized on a poly(ethylene terephthalate) and polystyrene film, respectively, in a specific pattern by photolithography. **Sulfated hyaluronic** acid was prepared from hylaronic acid by the **treatment** of sulfur trioxide/pyridine complex. Heparin was purchased and used without further treatment. The polysaccharides were coupled with azidoaniline. The derivatized polysaccharides were cast on a film from aqueous solution. After drying, the film was photo-irradiated in the presence or absence of a photomask. The micropatterning was confirmed by staining with a cationic dye. Platelet adhesion was reduced on the sulfated hyaluronic acid-immobilized areas. The immobilized sulfated hyaluronic acid significantly reduced thrombus formation. On the other hand, cells were cultured on the heparin-immobilized film. In the presence of fibroblast growth factor (FGF), the growth of mouse fibroblast STO cells was enhanced only on the heparin-immobilized regions. This result indicated that micropattern-immobilized heparin activated FGF for cell growth activity.

L9 ANSWER 2 OF 39 SCISEARCH COPYRIGHT 2000 ISI (R)
ACCESSION NUMBER: 1999:341792 SCISEARCH
THE GENUINE ARTICLE: 190NF
TITLE: **Sulphated polysaccharides** derived from dextran: biomaterials for vascular

therapy

AUTHOR: Chaubet F (Reprint); Huynh R; Champion J; Jozefonvicz J; Letourneur D
CORPORATE SOURCE: UNIV PARIS 13, LAB RECH MACROMOL, CNRS UMR 7540, INST GALILEE, AVE JB CLEMENT, F-93430 VILLETANEUSE, FRANCE (Reprint)
COUNTRY OF AUTHOR: FRANCE
SOURCE: POLYMER INTERNATIONAL, (APR 1999) Vol. 48, No. 4, pp. 313-319.
Publisher: JOHN WILEY & SONS LTD, BAFFINS LANE CHICHESTER, W SUSSEX PO19 1UD, ENGLAND.
ISSN: 0959-8103.
DOCUMENT TYPE: Article; Journal
FILE SEGMENT: PHYS
LANGUAGE: English
REFERENCE COUNT: 42

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB CMDBS are synthetic dextran derivatives randomly substituted with carboxymethyl (CM), benzylamide (B), sulphonate and sulphate groups (S). Depending on their overall composition, these compounds are endowed with heparin-like properties such as **anticoagulant** activity. Indeed, some CMDBS with high CIM and S contents delay blood **coagulation**, whilst some derivatized dextrans without significant **anticoagulant** capacity are potent antiproliferative agents for rat smooth muscle cells (SMCs) in vitro as well as heparin. The growth inhibition is dose dependent, reversible and nontoxic. This result is of prime interest for medical use because proliferation of vascular SMCs is postulated to be a key step in the pathogenesis of atherosclerosis or restenosis after vascular surgery such as angioplasty. By varying the overall composition in the different substituents, we have also prepared CMDBS exhibiting a stimulatory effect on the in vitro growth of human endothelial cells (EC). Heparin, under similar experimental conditions, slightly inhibited EC growth. The data indicate a synergistic role of all substituents grafted onto the dextran backbone without considering that any can be responsible alone for this effect. We conclude that a suitable distribution of CM, B and S groups on dextran can mimic heparin activity in terms of **anticoagulant** activity and antiproliferative capacity on SMC growth. Moreover, some CMDBS are also endowed with a stimulatory effect on EC growth. These properties confer great interest to these synthetic polysaccharides for vascular therapy. (C) 1999 Society of Chemical Industry.

L9 ANSWER 3 OF 39 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 1999140034 MEDLINE
DOCUMENT NUMBER: 99140034
TITLE: Effects of heparin and related sulfated polysaccharides on tissue factor expression induced

by mitogenic and non-mitogenic factors in human vascular smooth muscle cells.

AUTHOR: Xuereb J M; Herbert J M; Sie P; Boneu B; Constans J
CORPORATE SOURCE: Laboratoire de Recherche sur l'Hemostase et la Thrombose, Hopital Purpan, Toulouse, France.

SOURCE: THROMBOSIS AND HAEMOSTASIS, (1999 Jan) 81 (1) 151-6. Journal code: VQ7. ISSN: 0340-6245.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199907
ENTRY WEEK: 19990705

AB Smooth muscle cells (SMCs) of the intima are generally quiescent and non proliferative. Their proliferation due to different stimulations occurs in myointimal hyperplasia and is regularly present in atherogenesis or after transluminal angioplasty leading to vascular occlusive stenosis. In the course of these pathologies, the Tissue Factor (TF) synthesis was upregulated and rapidly expressed at the membrane of the SMCs. Heparin is known to inhibit SMCs proliferation induced by FCS. We evaluated the inhibitory effect of heparin on the expression of TF induced by various mitogenic (FCS, PDGF-BB and EGF) and non-mitogenic (bacterial LPS) agents. Inhibition by heparin of SMCs proliferation induced by the same agonists was also determined. Quiescent human vascular SMCs from normal adult arteries were **treated** for 1 h by heparin and related **sulfated polysaccharides** before stimulation by the agonists. All the agonists up-regulated the expression of TF antigen and activity. TF expression induced by the growth factors was inhibited by heparin (IC 50: 10-30 microg/ml), and other sulfated polysaccharides (IC 50: 1-5 microg/ml). SMCs proliferation, late activation of the extracellular signal-regulated kinases (ERK1/2), and PKC activity were inhibited by heparin (IC 50: 30-50 microg/ml) in SMCs stimulated by FCS but not in SMCs treated by PDGF or EGF. In contrast, heparin had no effect on LPS-induced TF expression nor on LPS-induced PKC activation. These results indicate that, besides its well known effect on SMC proliferation, heparin displays an inhibitory effect on cell mediated blood **clotting** processes through regulation of the TF expression.

L9 ANSWER 4 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1998-148026 [14] WPIDS
DOC. NO. NON-CPI: N1998-117313
DOC. NO. CPI: C1998-048331
TITLE: New sulphated polysaccharides e.g. sulphated oxidised regenerated cellulose - are **matrix metalloproteinase** inhibitors and **anticoagulants** useful in **wound** dressings and soft tissue implants and for treating

wounds.

DERWENT CLASS: A96 B07 D22 P34
INVENTOR(S): DOYLE, P J; GRADY, M W; HOUSTON, P; SINCLAIR, L
PATENT ASSIGNEE(S): (JOHJ) JOHNSON & JOHNSON MEDICAL INC; (JOHJ) JOHNSON & JOHNSON MEDICAL LTD
COUNTRY COUNT: 79
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2317182	A	19980318	(199814)*		19
WO 9811141	A1	19980319	(199818)		
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW					
AU 9741315	A	19980402	(199833)		
NO 9901160	A	19990510	(199928)		
EP 925310	A1	19990630	(199930)	EN	
R: DE DK ES FR GB IE IT PT SE					
BR 9711747	A	19990824	(200001)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2317182	A	GB 1996-18958	19960911
WO 9811141	A1	WO 1997-GB2477	19970910
AU 9741315	A	AU 1997-41315	19970910
NO 9901160	A	WO 1997-GB2477	19970910
		NO 1999-1160	19990310
EP 925310	A1	EP 1997-939097	19970910
		WO 1997-GB2477	19970910
BR 9711747	A	BR 1997-11747	19970910
		WO 1997-GB2477	19970910

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 9741315	A	Based on	WO 9811141
EP 925310	A1	Based on	WO 9811141
BR 9711747	A	Based on	WO 9811141

PRIORITY APPLN. INFO: GB 1996-18958 19960911
AN 1998-148026 [14] WPIDS
AB GB 2317182 A UPAB: 19991207

Sulphated polysaccharides (I) consisting of sulphated cellulose derivatives or sulphated polyanionic polysaccharides are new.

PREFERRED POLYSACCHARIDE - (I) is sulphated hydroxyethyl cellulose, sulphated carboxymethyl cellulose or especially sulphated oxidised regenerated cellulose, or is sulphated pectin, sulphated hyaluronic acid or especially sulphated alginate. It has an average of at least 0.1 and preferably at least 1 sulphate groups per saccharide residue, an average molecular weight of 25000-250000, and is soluble in water to an extent of at least 10 g/l at 25 deg. C. (I) is in the form of woven, non-woven or knitted fabrics or solid complexes with collagen.

USE - (I) have an exceptional ability to bind to **matrix metalloproteinases** and are useful for treating medical conditions mediated by **matrix metalloproteinases**, such as chronic **wounds** and decubitis ulcers. They are also useful for preventing or reducing blood **coagulation**.

DOSAGE - The sulphated polysaccharide is administered topically, orally or parenterally, or as a **wound** dressing material or a soft tissue implant. Preferably (I) is administered as an 0.1-10 wt.% ointment to treat chronic **wounds**.

ADVANTAGE - (I) have **anticoagulant** properties which are the exact opposite of the known haemostatic properties of oxidised regenerated cellulose.

Dwg.0/0

L9 ANSWER 5 OF 39 MEDLINE DUPLICATE 2

ACCESSION NUMBER: 1998422316 MEDLINE
DOCUMENT NUMBER: 98422316
TITLE: Mechanism of factor IXa inhibition by antithrombin in the presence of unfractionated and low molecular weight heparins and fucoidan.
AUTHOR: Mauray S; de Raucourt E; Talbot J C; Dachary-Prigent J; Jozefowicz M; Fischer A M
CORPORATE SOURCE: Laboratoire de Recherche en Hematologie, Hopital Necker Enfants-Malades, Universite Paris V, 75743 Paris Cedex 15, France.
SOURCE: BIOCHIMICA ET BIOPHYSICA ACTA, (1998 Sep 8) 1387 (1-2) 184-94.
Journal code: A0W. ISSN: 0006-3002.
PUB. COUNTRY: Netherlands
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 199901
ENTRY WEEK: 19990104

AB Heparin exerts its **anticoagulant** activity by catalysing the inhibition of **coagulation** proteases by antithrombin (AT). Its main target is thrombin but it also catalyses the inhibition of the other serine-proteases of the **coagulation**

cascade, such as factor IXa (fIXa). The aim of this study was to compare the catalysis of inhibition of blood fIXa by antithrombin in the presence of several **sulfated polysaccharides** with **anticoagulant** activity, i.e. heparin, three widely used in **therapeutics** low molecular weight heparins (LMWH) and fucoidan. Plots of the second-order rate constants of the fIXa-antithrombin reaction vs. the concentration of added heparin and LMWH are bell-shaped and fit the kinetic model established for thrombin-antithrombin reaction by Jordan R., Beeler D., Rosenberg R. (1979) J. Biol. Chem., 254, 2902-2913. In the ascending branch, the catalyst (C) binds quickly to the inhibitor (I) to form a catalyst-inhibitor (CI) complex which is more reactive towards the enzyme (E) than the free inhibitor, leading to the formation of an inactive enzyme-inhibitor complex (EI) and the release of free catalyst, in a rate-limiting second step. After a maximum corresponding to an optimal catalyst concentration, the decrease in the reaction rate was in keeping with the formation of a catalyst-enzyme (CE) complex, whose inactivation by the CI complex was slower than that of the free enzyme. Maximum second-order rate constants for the inhibition of fIXa by AT were 105, 6.8, 12.24 and 22 microM-1 min-1 with heparin, Enoxaparin, Fraxiparin and Fragmin, respectively, leading to 3500-, 225-, 405- and 728-fold increases in the inhibition rate in the absence of polysaccharide, respectively.. Fucoidan yielded 23-fold increase in the fIXa-antithrombin interaction rate. The kinetic profiles obtained with this polysaccharide exhibited ascending branch which correlated well with the kinetic model based on the formation of binary complexes (CI or CE). Fucoidan was covalently conjugated with a fluorescent probe (DTAF) and used in conjunction with fluorescence anisotropy to follow its binding to antithrombin, heparin cofactor II (HCII), thrombin and fIXa. The binding of fucoidan to these proteins occurred with low affinities when compared to heparin and LMWH. Fucoidan had higher affinity for the inhibitor HCII compared to antithrombin and enzymes. These data suggest that binding of heparins and fucoidan to the inhibitor (CI) is required for the polysaccharide-dependent enhancement in the rate of neutralization of the enzyme by the inhibitor.

L9 ANSWER 6 OF 39 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 1998167320 MEDLINE
DOCUMENT NUMBER: 98167320
TITLE: Influence of Aloe vera on the glycosaminoglycans in the matrix of healing dermal **wounds** in rats.
AUTHOR: Chithra P; Sajithlal G B; Chandrakasan G
CORPORATE SOURCE: Department of Biochemistry, Central Leather Research Institute, Madras, India.
SOURCE: JOURNAL OF ETHNOPHARMACOLOGY, (1998 Jan) 59 (3) 179-86.

Searcher : Shears 308-4994

Journal code: K8T. ISSN: 0378-8741.
PUB. COUNTRY: Ireland
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY WEEK: 19980603

AB The influence of Aloe vera (L.) Burman f. on the glycosaminoglycan (GAG) components of the matrix in a healing **wound** was studied. **Wound** healing is a dynamic and complex sequence of events of which the major one is the synthesis of extracellular matrix components. The early stage of **wound** healing is characterized by the laying down of a provisional matrix, which is then followed by the formation of granulation tissue and synthesis of collagen and elastin. The provisional matrix or the ground substance consists of GAGs and proteoglycans (PGs), which are protein GAG conjugates. In the present work, we have studied the influence of Aloe vera on the content of GAG and its types in the granulation tissue of healing **wounds**. We have also reported the levels of a few enzymes involved in matrix metabolism. The amount of ground substance synthesized was found to be higher in the **treated wounds**, and in particular, **hyaluronic** acid and dermatan **sulphate** levels were increased. The levels of the reported glycohydrolases were elevated on treatment with Aloe vera, indicating increased turnover of the matrix. Both topical and oral treatments with Aloe vera were found to have a positive influence on the synthesis of GAGs and thereby beneficially modulate **wound** healing.

L9 ANSWER 7 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1996-403782 [41] WPIDS
DOC. NO. CPI: C1996-126811
TITLE: Use of poly anions of a non-animal origin - e.g. vegetable, bacteria, fungi or lichen, sulphated polysaccharide(s) e.g. poly de oxy ribo nucleic acid, used to treat e.g. skin **wounds** and alopecia.
DERWENT CLASS: B04 D21
INVENTOR(S): FACCHINI, A
PATENT ASSIGNEE(S): (REPH-N) RES PHARMA SRL
COUNTRY COUNT: 8
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 730867	A2	19960911	(199641)*	EN	8
R: BE DE ES FR IT LU NL PT					
EP 730867	A3	19970108	(199712)		
IT 1275881	B	19971024	(199826)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 730867	A2	EP 1996-103360	19960305
EP 730867	A3	EP 1996-103360	19960305
IT 1275881	B	IT 1995-MI458	19950309

PRIORITY APPLN. INFO: IT 1995-MI458 19950309
AN 1996-403782 [41] WPIDS
AB EP 730867 A UPAB: 19961011
Use of polyanions (I) of non-animal origin for the cosmetic and dermatological treatment of the skin and for trichological treatment is new.

Pref., (I) have a mol. wt. of 5000-100000. (I) are of vegetable, bacteria, fungi or lichen origin, esp. sulphated polysaccharides with a pref. S content of 5-20 wt./wt.%. The polysaccharide is a polydeoxyribonucleic acid. The polyanion is mixed with cosmetic vehicles and excipient.

USE - (I) are used in the treatment of skin **wounds** and alopecia (claimed).

Dwg.0/0

L9 ANSWER 8 OF 39 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 97048218 MEDLINE
DOCUMENT NUMBER: 97048218
TITLE: A natural sulfated polysaccharide, calcium spirulan, isolated from Spirulina platensis: in vitro and ex vivo evaluation of anti-herpes simplex virus and anti-human immunodeficiency virus activities.
AUTHOR: Hayashi K; Hayashi T; Kojima I
CORPORATE SOURCE: Department of Virology, Toyama Medical and Pharmaceutical University, Japan.
SOURCE: AIDS RESEARCH AND HUMAN RETROVIRUSES, (1996 Oct 10) 12 (15) 1463-71.
Journal code: ART. ISSN: 0889-2229.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY WEEK: 19970403
AB A sulfated polysaccharide named calcium spirulan (Ca-SP) has been isolated from a sea alga, Spirulina platensis, as an antiviral component. The anti-human immunodeficiency virus type 1 (HIV-1) and anti-herpes simplex virus type 1 (HSV-1) activities of Ca-SP were compared with those of dextran sulfate (DS) as a representative

sulfated polysaccharide. Anti-HIV-1 activities of these agents were measured by three different assays: viability of acutely infected CD4-positive cells, or a cytopathology assay; determination of HIV-1 p24 antigen released into culture supernatants; and inhibition of HIV-induced syncytium formation. Anti-HSV-1 activity was assessed by plaque yield reduction. In addition, their effects on the blood **coagulation** processes and stability in the blood were evaluated. These data indicate that Ca-SP is a potent antiviral agent against both HIV-1 and HSV-1. Furthermore, Ca-SP is quite promising as an anti-HIV agent because even at low concentrations of Ca-SP an enhancement of virus-induced syncytium formation was not observed, as was observed in DS-treated cultures, Ca-SP had very low **anticoagulant** activity, and showed a much longer half-life in the blood of mice when compared with that of DS. Thus, Ca-SP can be a candidate agent for an anti-HIV **therapeutic** drug that might overcome the disadvantages observed in many **sulfated polysaccharides**. When the role of chelation of calcium ion with sulfate groups was examined by removing calcium or its replacement by sodium, the presence of calcium ion in the molecule was shown to be essential for the dose-dependent inhibition of cytopathic effect and syncytium formation induced by HIV-1.

L9 ANSWER 9 OF 39 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 96437188 MEDLINE
DOCUMENT NUMBER: 96437188
TITLE: Activation of **coagulation** by a LDL-apheresis device.
AUTHOR: Giansante C; Bordin P; Fiotti N; Calabrese S; Petrucco A; Da Col P G; Fonda M; Cattin L
CORPORATE SOURCE: Institute of Clinical Medicine, University of Trieste, Italy.. carlog@clmed.univ.trieste.it
SOURCE: BLOOD COAGULATION AND FIBRINOLYSIS, (1996 Jun) 7 (4) 447-52.
Journal code: A5J. ISSN: 0957-5235.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199702
ENTRY WEEK: 19970204
AB LDL-apheresis often induces an almost constant and progressive increase of the differential pressure of plasma flowing through the dextran **sulphate cellulose** column, reducing the efficacy of the **treatment**. On two occasions we were able to identify a fibrin plug by immunofluorescence. Our aim was to verify the modification of some **coagulation** indicators in patients undergoing LDL-apheresis and whether an activation of **coagulation** occurs in the LDL-apheresis device. Blood samples were obtained from six patients with familial

hypercholesterolaemia who were undergoing LDL-apheresis. During the same session further blood/ plasma samples were taken from the LDL-apheresis device at different sites and at different volumes of filtered blood. In patients after LDL-apheresis the following modifications were found: a 25% decrease of fibrinogen and a slight increase in F1 + 2 plasma levels. No relevant changes in thrombin-antithrombin complexes and fibrinopeptide A plasma levels were noted. In the LDL-apheresis device the main results were: (a) fibrinogen was trapped in the dextran sulphate cellulose column in the early phases; (b) activation of **coagulation** was recognisable in the plasma separator during the procedure and progressively increased with duration of LDL-apheresis; (c) thrombin-antithrombin complexes, formed in the plasma separator, were retained by the dextran sulphate cellulose column. In conclusion, LDL-apheresis activates **coagulation** in the device. Shortening cycle time or using nafamostat mesilate as an **anticoagulant**, could be interesting alternatives for improving the procedure.

L9 ANSWER 10 OF 39 JICST-EPlus COPYRIGHT 2000 JST
ACCESSION NUMBER: 960946775 JICST-EPlus
TITLE: Intra-articular injection therapy of MR-20S (ulinastatin) for osteoarthritis of the knee joint: Effect on joint markers.
AUTHOR: SAMURA ATSUYOSHI; YAMADA HARUMOTO; YOSHIHARA YASUO; KOBAYASHI TATSUO; KIKUCHI TOSHIYUKI; TANAKA OSAMU
CORPORATE SOURCE: Natl. Def. Med. Coll.
SOURCE: Ensho (Japanese Journal of Inflammation), (1996) vol. 16, no. 5, pp. 357-361. Journal Code: Y0899A (Tbl. 2, Ref. 19)
CODEN: ENSHEE; ISSN: 0389-4290
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB Intra-articular injections of MR-20S (ulinastatin, urinary trypsin inhibitor)were performed for 16 knee joints of 16 patients(6 males, 10 females, average age 65.1.+-.8.2) with osteoarthritis (OA). Levels of 7 joint markers in the synovial fluids were measured before and after injection **therapy**. Levels of chondroitin 4-sulfate (C-4S), 6-**sulfate** (C-6S) and **hyaluronic** acid(HA) were measured using HPLC. Levels of type II procollagen C-peptide (pCOL II-C), **MMP**-3, TIMP-1 and PMN elastase were measured by EIA Levels of pCOL II-C increased significantly after injections ($p<0.01$). In the patients with C-4S levels of.GEQ.15 nmol/ml or C-6S levels of .GEQ.40 nmol/ml before injection, these chondroitin isomers decreased significantly($p<0.01$). No significant changes of HA, **MMP**-3, TIMP-1 and PMN elastase levels were observed after injection. The present data suggested that

intra-articular injection of MR-20S might affect the metabolism of cartilage and synovium in OA. (author abst.)

L9 ANSWER 11 OF 39 EMBASE COPYRIGHT 2000 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 96298110 EMBASE
DOCUMENT NUMBER: 1996298110
TITLE: Purification and characterization of **coagulating** enzyme from Aspergillus sydowi.
AUTHOR: Maksoud S.A.; Abdel-Rahman T.M.A.; Tharwat N.A.H.
CORPORATE SOURCE: Botany Department, Faculty of Science, University of Cairo,Giza, Egypt
SOURCE: Acta Pharmaceutica Turcica, (1996) 38/3 (81-90).
ISSN: 1010-0849 CODEN: APTUES
COUNTRY: Turkey
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 004 Microbiology
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A coagulase of Aspergillus sydowi has been purified to near homogenity from culture filtrate by **treatment** with Ca3(PO4)2 gel, precipitation with ammonium **sulphate**, chromatographed on DEAE **cellulose**, DEAE Sephadex and Sephadex G-150. Fractionation of Ca3(PO4)2 gel eluate on DEAE cellulose gave 5 active fractions with a low protein content whereas fraction of supernatant on DEAE Sephadex separates 3 active fractions (a, b and c). All the above active fractions **coagulate** both plasma and milk. The apparent molecular weight (for the three fractions a, b and c) was 65000 Da as indicated by Sephadex G-100 gel filtration and SDS-PAGE. Fraction b was used as representative for characterization of coagulase. The purified enzyme had optimum temperature of 35.degree.C, optimum pH 7 and 7.9 and Km values 3.439 mg/ml and 7.14 mg/ml for plasma and milk respectively.

L9 ANSWER 12 OF 39 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 96205085 MEDLINE
DOCUMENT NUMBER: 96205085
TITLE: [-**Anticoagulant** drugs-].
Gerinnungshemmende Substanzen.
AUTHOR: Gulba D C
CORPORATE SOURCE: Franz-Volhard-Klinik am Max-Delbruck-Zentrum fur Molekulare Medizin, Klinikum Rudolf Virchow, Humboldt-Universitat zu Berlin.
SOURCE: HERZ, (1996 Feb) 21 (1) 12-27. Ref: 164
Journal code: F88. ISSN: 0340-9937.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
Searcher : Shears 308-4994

(REVIEW, TUTORIAL)
LANGUAGE: German
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199609

AB In todays medicine, **anticoagulant** drugs like heparin and coumadin derivatives have become indispensable for the **treatment** of thrombo-embolic diseases. Heparin, consisting of long poly-**sulfated polysaccharide** chains of variable length and sequences is mostly derived from porcine mucosa. Its bioavailability by other than the parenteral way of administration is almost negligible. Therefore, with only few exceptions, it is almost exclusively applied in hospitalized patients (short-term therapy) or to bridge 2 phases of treatment with oral **anticoagulant** drugs. Today, besides the conventional high-molecular weight heparins, new fractionated heparins are gaining more and more attention. They offer the advantage of a more reliable resorption from the subcutaneous tissue and thus warrant reliable plasma levels. In many recent randomized trials of deep vein thrombosis and pulmonary embolism, those fractionated heparins have proven to successfully substitute for intravenously applied, aPTT-controlled unfractionated heparin. It remains however open, whether this also translates into the prevention of arterial thrombo-embolic diseases. Heparin may not pass through the placental barrier nor into the milk and is regarded non-teratogenic. Therefore, it may be regarded the ideal **anticoagulant** for pregnant women and lactating mothers. Those women, however, still carry the heparin-associated risk of bleeding and osteoporosis. In comparison: Coumadin derivatives interfere with the carboxylation of the **clotting** factors II, VII, IX, and X as well as proteins C and S. By inhibiting the synthesis of these proteins they shift the haemostatic balance to a lower level. In addition, they are almost completely bioavailable by the enteral pathway. They are, therefore, regarded the drugs of choice for long-term **anticoagulant** therapy in patients at particular thromboembolic risk. For their therapeutic range, being extremely narrow, meticulous drug monitoring by repeated INR-measurements as well as a reliable compliance of the patient to drug intake and dietary restrictions are mandatory to exclude phases with over- or under-**anticoagulation**. Above all, coumadin therapy is characterized by numerous drug interactions. Thus, whenever the basal medication is changed, for whatever reason, more intense care must be laid to drug monitoring, and the intervals for INR determinations must transiently be shortened. Coumadin derivatives do pass through the placental barrier and in minor amounts also into the milk of breast feeding mothers. Furthermore, they are highly teratogenic. If taken during pregnancy, malformations of the central nervous system are reported to occur in some 10% to 30% of the infants. Thus during pregnancy and in the lactation period, coumadin therapy should be avoided. Bleeding

episodes of different severity are the most frequent adverse effects of **anticoagulant** therapy, no matter whether heparin or coumadin is given. There is a direct relation between the intensity of **anticoagulant** therapy and the frequency of bleeds. Luckily, most bleeding episodes do not create major therapeutic problems. In case of severe bleeds, however, the **anticoagulant** therapy must immediately be suspended. In case of coumadin therapy the immediate administration of 4 packs of PPSB (prothrombin-complex-concentrates) or FFP (fresh-frozen-plasma) with concomitant low doses of heparin is additionally advised. Allopecia diffusa, urticartia and allergic reactions are known side effects of **anticoagulant** therapy. Patients on long-term heparin may also suffer from severe osteoporosis. On the other hand, heparin treatment raises the hazzards of a HAT-Syndrome (heparin-associated thrombocytopenia) (estimated frequency 0.01% to 0.1% of treated patients), giving rise to severe and life-threatening thrombo-embolic side effects predominantly in the arterial tree. In these cases, heparin must be suspended despite those severe thrombo-embolic episodes.

L9 ANSWER 13 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1995-147163 [19] WPIDS
DOC. NO. CPI: C1995-068254
TITLE: Agent for **treating** malaria - comprising **sulphated polysaccharide**, pref. **sulphated** cardolanic acid, and opt. quinine.
DERWENT CLASS: A96 B04
INVENTOR(S): CHIHARA, G; HAVLIK, I; KANEKO, Y; MIMURA, T
PATENT ASSIGNEE(S): (AJIN) AJINOMOTO KK
COUNTRY COUNT: 23
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9508334	A1	19950330	(199519)*	JA	16
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL OA PT SE					
W: CA CZ JP KR US					
EP 676206	A1	19951011	(199545)	EN	8
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
CZ 9501280	A3	19951018	(199549)		
EP 676206	A4	19951025	(199620)		
JP 07509684	X	19960123	(199642)		
US 5780452	A	19980714	(199835)		
EP 676206	B1	20000105	(200006)	EN	
R: DE ES FR GB IT					
DE 69422496	E	20000210	(200015)		
ES 2142407	T3	20000416	(200026)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9508334	A1	WO 1994-JP1544	19940920
EP 676206	A1	EP 1994-927070	19940920
		WO 1994-JP1544	19940920
CZ 9501280	A3	CZ 1995-1280	19940920
EP 676206	A4	EP 1994-927070	
JP 07509684	X	WO 1994-JP1544	19940920
		JP 1995-509684	19940920
US 5780452	A	WO 1994-JP1544	19940920
		US 1995-424493	19950907
EP 676206	B1	EP 1994-927070	19940920
		WO 1994-JP1544	19940920
DE 69422496	E	DE 1994-622496	19940920
		EP 1994-927070	19940920
		WO 1994-JP1544	19940920
ES 2142407	T3	EP 1994-927070	19940920

FILING DETAILS:

PATENT NO	KIND		PATENT NO
EP 676206	A1	Based on	WO 9508334
JP 07509684	X	Based on	WO 9508334
US 5780452	A	Based on	WO 9508334
EP 676206	B1	Based on	WO 9508334
DE 69422496	E	Based on	EP 676206
		Based on	WO 9508334
ES 2142407	T3	Based on	EP 676206

PRIORITY APPLN. INFO: JP 1993-233296 19930920
AN 1995-147163 [19] WPIDS
AB WO 9508334 A UPAB: 19950524
Antimalarial agent contains a sulphated polysaccharide (1) or its salt, pref. cardolan sulphate or its salt. Also claimed is an antimalarial agent contg. (I) or its salt and quinine.

USE - The agent is useful for treating malaria, including disease resistant to quinine and related drugs. (1) are known as **anticoagulant** and antiretroviral agents (JP62215529-A). Dose is 1-1000 mg/kg/day, by injection, as drops, etc. for (I) or salt alone, or 0.5-500 mg/kg/day when (I) or its salt is given with quinine.

Dwg.2/3

L9 ANSWER 14 OF 39 MEDLINE
ACCESSION NUMBER: 96331964 MEDLINE
DOCUMENT NUMBER: 96331964

TITLE: The effects of Salvia miltiorrhiza and polysaccharide sulphate on the adhesion of erythrocytes of the patients with cerebral thrombosis to cultured endothelial cells.

AUTHOR: Wang L; Huang X; Ding Z; Chen H; Peng R; Yuan G; Zhou D

CORPORATE SOURCE: Biomedical Engineering Research Unit, First Affiliated Hospital.

SOURCE: HUA-HSI I KO TA HSUEH HSUEH PAO [JOURNAL OF WEST CHINA UNIVERSITY OF MEDICAL SCIENCES], (1995 Dec) 26 (4) 381-5.
Journal code: GEB. ISSN: 0257-7712.

PUB. COUNTRY: China
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: Chinese

ENTRY MONTH: 199612

AB Salvia miltiorrhiza and polysaccharide sulphate are commonly prescribed for curing cerebral vascular diseases. In this study, we found that the adhesion of erythrocytes of the patients with cerebral thrombosis to cultured human umbilical vein endothelial cells was decreased in number and intensity after the erythrocytes were **treated** with salvia miltiorrhiza and **polysaccharide sulphate** in flow field. Moreover we found that polysaccharide sulphate was more effective than salvia miltiorrhiza in preventing adherence in common doses. The two drugs' effects of preventing adherence might be an important mechanism for curing the patients with cerebral thrombosis.

L9 ANSWER 15 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1994-111120 [14] WPIDS

CROSS REFERENCE: 1997-362878 [33]

DOC. NO. CPI: C1994-051277

TITLE: Novel moco-adhesive polymer delivery system - contains cationic polysaccharide polymers and anionic therapeutic agents which are substantive to mucosal surfaces, esp. of the eye.

DERWENT CLASS: A11 A96 B07

INVENTOR(S): MARLIN, L; YAMAMOTO, R K

PATENT ASSIGNEE(S): (UNIC) UNION CARBIDE CHEM & PLASTICS TECHNOLOGY; (UNIC) UNION CARBIDE CHEM & PLASTICS

COUNTRY COUNT: 20

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 590655	A1	19940406	(199414)*	EN	10
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
CA 2107301	A	19940331	(199424)		
JP 06192130	A	19940712	(199432)		8

US 5358706	A	19941025 (199442)	8	
JP 2969584	B2	19991102 (199951)	8	
CA 2107301	C	20000125 (200025)	EN	

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 590655	A1	EP 1993-115758	19930929
CA 2107301	A	CA 1993-2107301	19930929
JP 06192130	A	JP 1993-264010	19930929
US 5358706	A	US 1992-954753	19920930
JP 2969584	B2	JP 1993-264010	19930929
CA 2107301	C	CA 1993-2107301	19930929

FILING DETAILS:

PATENT NO	KIND	PATENT NO
JP 2969584	B2 Previous Publ.	JP 06192130

PRIORITY APPLN. INFO: US 1992-954753 19920930

AN 1994-111120 [14] WPIDS

CR 1997-362878 [33]

AB EP 590655 A UPAB: 20000524

Delivering of an anionic therapeutic agent to a mucosal surface comprises applying a clear aq. soln. to the mucosal surface. The soln. comprises (a) water; (b) a cationic polysaccharide polymer which is substantive to the mucosal surface; (c) an anionic therapeutic agent.

The cationic polysaccharide polymer is a cationic deriv. of cellulose ether, which is water-soluble. The cationic substitution should be greater than 0.2. The anionic agent is glycosaminoglycan, hyaluronan, hyaluronic acid or another hyaluronan deriv., and is covalently bonded to the cationic polysaccharide. The soln. may also additionally contain an isotonic salt soln.

USE/ADVANTAGE - This delivery system is particularly useful for the delivery of anionic ophthalmic pharmaceuticals e.g. antivirals, antiinflammatory agents (prostaglandins, salicyclic acid, proprionic acid, fenemates, cromolyn), anti-infection agents (beta-lactam antibiotics), glaucoma agents (carbonic anhydrase inhibitors), **wound** healing agents (epidermal gowth factor), diagnostic agents (fluorescein), dry eye agents (**hyaluronic** acid, chrondroitin **sulphate**) and mixtures of them, to **treat** conditions such as dry eye or ulceration due to contact lens.

ADVANTAGE - The delivery system allows therapeutic agents to adhere substantively to mucosal membranes.

Dwg.0/2

ABEQ US 5358706 A UPAB: 19941212
Delivery of an anionic therapeutic agent to the eyes comprises providing an aq. soln. contg. (a) water; (b) a cationic polysaccharide polymer with a cationic substitution of more than 0.2 which is substantive to the eye; and (c) an anionic therapeutic agent; (c) is selected from hyaluron, an hyaluronic acid and hyaluronan derivs. It is electrostatically bonded to the cationic polysaccharide and the soln. is clear.
USE/ADVANTAGE - The agent is for treatment of e.g. dyslacrima (dry eye) esp. in older people. The polymers have bioadhesive properties.
Dwg.0/2

L9 ANSWER 16 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1993-258835 [32] WPIDS
DOC. NO. NON-CPI: N1993-199082
DOC. NO. CPI: C1993-115006
TITLE: Assaying sulphated polysaccharide - by binding to labelled protein and detecting change in optical properties caused by complexing, esp. for in-vivo, real time monitoring of heparin.
DERWENT CLASS: B04 J04 S03
INVENTOR(S): CASS, A E G; SOHANPAL, K
PATENT ASSIGNEE(S): (UNLO) IMPERIAL COLLEGE SCI TECHN MED
COUNTRY COUNT: 20
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9315406	A1	19930805	(199332)*		
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE					
W: AU CA GB JP US					
AU 9334564	A	19930901	(199350)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9315406	A1	WO 1993-GB197	19930129
AU 9334564	A	AU 1993-34564	19930129

FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9334564	A Based on	WO 9315406

PRIORITY APPLN. INFO: GB 1992-2019 19920130
AN 1993-258835 [32] WPIDS
Searcher : Shears 308-4994

AB WO 9315406 A UPAB: 19931118
A sample is assayed for **sulphated polysaccharide** (I) by **treating** it with a complementary binding polymer (A), labelled with an optical reporter gp. which is sensitive to the formation and/or presence of an (A)-(I) complex. The change in optical properties of (A) is measured and compared with values for a control analysis using the same reactants.

Also new is an assay device for this process.

(I) is polyanionic and can form a complex with a protein; specifically it is heparin (Ia) (A) has at least one cationic gp. and the reporter gp. is a fluorophone (the optical change measured being quenching).

USE/ADVANTAGE - (Ia) is widely used as an anti-**coagulant**, the concn. of which needs to be monitored to prevent premature **coagulation** during surgery. This method is esp. useful for in vivo monitoring since it provides instantaneous values of (I) concn., can be miniaturised, is relatively simple mechanically and easy to use.
Dwg.2a/8

L9 ANSWER 17 OF 39 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 94093090 MEDLINE
DOCUMENT NUMBER: 94093090
TITLE: Anaphylactoid reactions and bradykinin generation in patients treated with LDL-apheresis and an ACE inhibitor.
AUTHOR: Koga N; Nagano T; Sato T; Kagasawa K
CORPORATE SOURCE: Department of Artificial Organs, Koga Hospital, Kurume City, Japan..
SOURCE: ASAIO JOURNAL, (1993 Jul-Sep) 39 (3) M288-91.
Journal code: BBH. ISSN: 1058-2916.
PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199404
AB An anaphylactoid reaction was observed in a patient **treated** with low density lipoprotein (LDL) apheresis using a dextran **sulfate cellulose** (DSC) column and administration of an angiotensin converting enzyme (ACE) inhibitor. The authors have investigated to determine the causes and countermeasures. When using heparin as the **anticoagulant**, large increases in bradykinin levels in plasma were observed after its passage through the column during the procedure. Increase in bradykinin levels in blood were observed, to a lesser but still significant degree, after terminating the procedure. When withholding the ACE inhibitor for a few days before LDL-apheresis, the increase in bradykinin levels was much weakened and the anaphylactoid reactions became mild. Such anaphylactoid reactions were not observed when the ACE inhibitor was

withheld for a few weeks, or when using Futhan instead of heparin as the **anticoagulant**. Although the critical level of bradykinin needed to cause the anaphylactoid reaction and the other possible causal factors remained unclear, the bradykinin levels are thought to be related to the reactions.

L9 ANSWER 18 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1992-260792 [32] WPIDS
TITLE: Synergistic antiviral composition contains BFGF and **sulphated polysaccharide** - for **treating** viral infections e.g. HSV-1 and -2, cytomegalovirus, HIV, influenza virus etc..
DERWENT CLASS: B04
INVENTOR(S): BATTISTINI, C; CARMINATI, P; GAROFANO, L; MAZUE, G; UNGHERI, D
PATENT ASSIGNEE(S): (FARM) FARMITALIA ERBA SRL CARLO
COUNTRY COUNT: 9
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 497341	A2	19920805	(199232)*	EN	20
R: DE ES FR GB IT					
AU 9210524	A	19920806	(199239)		
CA 2060277	A	19920801	(199242)		
EP 497341	A3	19930505	(199402)		
US 5288704	A	19940222	(199408)		19
JP 06080583	A	19940322	(199416)		13

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 497341	A2	EP 1992-101541	19920130
AU 9210524	A	AU 1992-10524	19920128
CA 2060277	A	CA 1992-2060277	19920129
EP 497341	A3	EP 1992-101541	19920130
US 5288704	A	US 1992-830330	19920131
JP 06080583	A	JP 1992-15488	19920130

PRIORITY APPLN. INFO: GB 1991-2145 19910131; GB 1992-410 19920109
AN 1992-260792 [32] WPIDS
AB EP 497341 A UPAB: 19940223
Synergistic compsn. for preventing or treating infections caused by enveloped viruses comprises a fibroblast growth factor (FGF), an antiviral sulphated polysaccharide (I) plus opt. one or more excipients.

Searcher : Shears 308-4994

More specifically, FGF is basic-FGF or its analogues (esp. fragments). (I) is carragenan; heparin; dextran sulphate, pentosan polysulphate, or an agarose-type sulphated polysaccharide produced by Rhodophyceae algae.

USE/ADVANTAGE - The compsn. is esp. used to control herpes simplex (HSV-1 or -2); herpes varicella/zoster, cytomegalovirus; influenza; human respiratory syncytial virus; Semliki forest virus; HIV or Moloney sarcoma virus. FGF is already known to promote angiogenesis, **wound** healing an tissue (including bone and nerve)regeneration, and to inhibit growth and infectivity of some viruses. When FGF and (I) are formulated together, the antiviral activity is greater than that excepted for an additive effe

Dwg.0/6

ABEQ US 5288704 A UPAB: 19940407

Pharmaceutical compsn., comprises a FGF, an antiviral sulphated polysaccharide and an excipient. FGF is e.g. amidated human or bovine FGF.

USE/ADVANTAGE - For treating and preventing infections caused by enveloped viruses e.g. herpes, viruses type alpha, beta or gamma orthomyxovirus, a tropical virus or a retrovirus. Antiviral activity is superior to that expected from the sum of the individual activities.

Dwg.0/6

L9 ANSWER 19 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1992-074024 [10] WPIDS

CROSS REFERENCE: 1999-069782 [06]

DOC. NO. CPI: C1992-033912

TITLE: Synergistic **anticoagulant** compsn. - of lipoprotein-associated **coagulation** inhibitor and **sulphated polysaccharide**, for **treatment** and prevention of thrombotic diseases, etc..

DERWENT CLASS: B04

INVENTOR(S): WUN, T C; WUN, T

PATENT ASSIGNEE(S): (MONS) MONSANTO CO

COUNTRY COUNT: 17

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 473564	A	19920304	(199210)*		20
R: AT BE CH DE ES FR GB GR IT LI LU NL SE					
CA 2049873	A	19920228	(199220)		
PT 98779	A	19920731	(199235)		
JP 04257524	A	19920911	(199243)		13
JP 07033336	B2	19950412	(199519)		12
EP 473564	B1	19960320	(199616)	EN	13
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					

DE 69118056 E 19960425 (199622)
ES 2085462 T3 19960601 (199629)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 473564	A	EP 1991-870132	19910826
CA 2049873	A	CA 1991-2049873	19910826
PT 98779	A	PT 1991-98779	19910826
JP 04257524	A	JP 1991-213844	19910826
JP 07033336	B2	JP 1991-213844	19910826
EP 473564	B1	EP 1991-870132	19910826
DE 69118056	E	DE 1991-618056	19910826
		EP 1991-870132	19910826
ES 2085462	T3	EP 1991-870132	19910826

FILING DETAILS:

PATENT NO	KIND		PATENT NO
JP 07033336	B2	Based on	JP 04257524
DE 69118056	E	Based on	EP 473564
ES 2085462	T3	Based on	EP 473564

PRIORITY APPLN. INFO: US 1990-573083 19900827
AN 1992-074024 [10] WPIDS
CR 1999-069782 [06]
AB EP 473564 A UPAB: 19990210
Compsn. comprises lipoprotein-associated **coagulation** inhibitor (LACI) and an anti-**coagulant** sulphated polysaccharide (II). Pref. (II) is heparin, pentosan polysulphate, dermatan sulphate, dextran sulphate and heparin sulphate, esp. 0.1-4 units heparin and 5 microg LACI per ml plasma treated.

USE/ADVANTAGE - The combination exerts a synergistic **anticoagulant** action in whole plasma. LACI is useful for treating thrombotic diseases and in combination with heparin, inhibit both the intrinsic and extrinsic pathways of **coagulation**, and so are effective in clinical conditions where heparin alone is not sufficient e.g. disseminated intravascular **coagulation** where TF may be generated in large amts.

Dwg.0/7
ABEQ EP 473564 B UPAB: 19960422
A composition comprising lipoprotein-associated **coagulation** inhibitor and an **anticoagulant** sulphated polysaccharide in proportions that provide a synergistic **anticoagulation** effect upon exogenous administration to a warm blooded mammal.

Dwg.0/0

Searcher : Shears 308-4994

L9 ANSWER 20 OF 39 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1992:519971 BIOSIS
DOCUMENT NUMBER: BA94:128046
TITLE: EFFECT OF POLYSACCHARIDE SULPHATE ON THIXOTROPIC PROPERTIES OF WHOLE BLOOD IN PATIENTS WITH CEREBRAL THROMBOSIS.
AUTHOR(S): ZHOU D; YANG Y; LI L; YUAN G; CHEN H
CORPORATE SOURCE: DEP. NEUROL.
SOURCE: J WEST CHINA UNIV MED SCI, (1992) 23 (3), 241-244.
CODEN: HYDXET. ISSN: 0257-7712.
FILE SEGMENT: BA; OLD
LANGUAGE: Chinese
AB Using low shear 30 rheometer, we measured the thixotropic parameters of blood from 30 patients suffering from cerebral thrombosis. The result showed that the yield stress (.tau.0), non-Newtonian contribution of viscosity (.eta.s-.mu.) and viscosity of plasma (.eta.p) were significantly higher than those in the control group. Those patients were randomly divided into two groups. Each group included 15 patients. The patients in group 1 and group 2 were **treated** with **polysaccharide sulphate** (PSS) and DX40 respectively by intravenous drip for 14 days. The results showed that .tau.0, A, (.eta.2-.mu.) were significantly decreased in group 1 after treatment, but no significant change in the thixotropic parameters was found in group 2 after treatment. The total curative rate in group 1 was higher than that in group 2. These results suggest that the patients with cerebral thrombosis had evidently increased degree of RBC aggregation. PSS could decrease the aggregation of RBC more significantly than DX40 did. It was probably one of the reasons why the therapeutic effect on PSS on cerebral thrombosis was better than that of DX40.

L9 ANSWER 21 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1992-356578 [43] WPIDS
DOC. NO. CPI: C1992-158447
TITLE: Processing black sulphate lye - by adding **coagulating** additive comprising spent lye from oxygen-alkali treatment of cellulose, contg. tri sodium phosphate.
DERWENT CLASS: F09
INVENTOR(S): BALAKSHINA, N V; LUKASHOVA, S S; MOROZOVA, I V
PATENT ASSIGNEE(S): (KOTL-R) KOTLASS CELLULOSE PAPER COMBINE
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
SU 1696632	A1	19911207	(199243)*		3

Searcher : Shears 308-4994

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
SU 1696632	A1	SU 1990-4775964	19900102

PRIORITY APPLN. INFO: SU 1990-4775964 19900102
AN 1992-356578 [43] WPIDS
AB SU 1696632 A UPAB: 19931115
The method comprises introduction of **coagulating** additive comprising spent lye from the oxygen-alkali **treatment** of **cellulose** (I) into black **sulphate** lye, in amt. 1-3 wt.% per the wt. of black sulphate lye, leaving the mixt. to stand and sepn. of sulphate soap. (I) contains 0.12-1.00% trisodium phosphate.

Tests show that the proposed method increases the yield of sulphate soap up to 92.5% against 81-85% in the known method.

USE/ADVANTAGE - As a method of processing black sulphate lye, with sepn. of sulphate soap which is utilised in the prodn. of tall oil prods. The method increases the yield of sulphate soap at reduced cost. Bul.45/7.12.91
Dwg.0/0

L9 ANSWER 22 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1991-141728 [20] WPIDS
DOC. NO. CPI: C1991-060965
TITLE: Polyelectrolyte complex for **treatment** of virus diseases - contg. e.g. oligo- or **poly -saccharide sulphate** and poly-amino acid, for oral admin..
DERWENT CLASS: B04
INVENTOR(S): KRONE, V; MAGERSTADT, M; SCHRINNER, E; WALCH, A
PATENT ASSIGNEE(S): (FARH) HOECHST AG
COUNTRY COUNT: 14
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 427190	A	19910515	(199120)*		
R: AT BE CH DE ES FR GB IT LI LU NL SE					
DE 3937283	A	19910516	(199121)		
JP 03170435	A	19910724	(199136)		
PT 95823	A	19910913	(199140)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE

EP 427190	A	EP 1990-121190	19901106
DE 3937283	A	DE 1989-3937283	19891109
JP 03170435	A	JP 1990-301264	19901108

PRIORITY APPLN. INFO: DE 1989-3937283 19891109
AN 1991-141728 [20] WPIDS
AB EP 427190 A UPAB: 19930928
A polyelectrolyte complex for treating viral diseases comprises at least one polyacid and at least one polybase.

Pref. the polybase is a protein, a protein modified to be hydrophobic, a polybase modified to be hydrophobic, or polylysine, a lysine ester, chitosan or poly(2-N,N-dimethyl-aminoethyl) D,L-aspart amide. The polyacid is preferably an oligo- or polysaccharide whose OH groups are partly etherified or esterified, or a partly or completely sulphated substituted oligo- or polysaccharide, especially xylan sulphate and its lipophilic derivatives or dextran sulphate and its lipophilic deravitives. The complex is prepared by adding the polybase dropwise to the aqueous polyacid solution, or the polyacid dropwise to the aqueous solution, at a suitable temperature and pH. The dose depends on the components. The daily dose is 200-1500 mg/day and should not exceed 3 d/day orally.

USE/ADVANTAGE - For prophylaxiss and **treatment** of viral diseases, such as HIV and AIDS. **Sulphated** oligo- and **poly-saccharides** are already known to inhibit HIV, e.g. by inhibiting HIV reverse transcriptase, but they cannot be used for long-term administration because of their **anticoagulant** properties, and their short half life which requires repeated intravenous, intramuscular or subcutaneous injection. The new polyelectrolyte can be administered orally. @(8pp Dwg.No.0/0)

L9 ANSWER 23 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1991-008211 [02] WPIDS
DOC. NO. NON-CPI: N1991-006437
DOC. NO. CPI: C1991-003616
TITLE: **Polysaccharide**(s) with **sulphate** and ester or ether substits. - used for **treatment** and prophylaxis of retro-virus especially HIV.
DERWENT CLASS: A11 A96 B04 S03
INVENTOR(S): BADER, H; MAGERSTADT, M; MEICHSNER, C; SCHRINNER, E; WALCH, A; WIESNER, M
PATENT ASSIGNEE(S): (FARH) HOECHST AG
COUNTRY COUNT: 15
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

DE 3921761 A 19910103 (199102)*
EP 406685 A 19910109 (199102)
R: AT BE CH DE ES FR GB GR IT LI LU NL SE
JP 03043401 A 19910225 (199114)
TW 197373 A 19930101 (199324)

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3921761	A	DE 1989-3921761	19890701
EP 406685	A	EP 1990-112230	19900627
JP 03043401	A	JP 1990-170400	19900629
TW 197373	A	TW 1990-105879	19900717

PRIORITY APPLN. INFO: DE 1989-3921761 19890701
AN 1991-008211 [02] WPIDS
AB DE 3921761 A UPAB: 19930928
Linear or branched substd. polysaccharides (I) of the same or different natural or synthetic monomers with opt. (un)substd. NH2 groups and 5-80% of the OH groups substd. with OBY1 or -OCOBY2 groups are new. B = 2-30C non-aromatic hydrocarbon with up to 3 -CH2- groups replaced with -O-, up to 3 C=C bonds and up to three 1-4C alkyl substituents; Y1 = H, COOR, OSO3R2; Y2 = H, COOR; R = mono or di positive cation, 1-20C hydrocarbyl or 3-10C mono or di ether residue; R2 = cation The -OH groups of the polysaccharide (I) are 10-95% substd. with a gp. of formula SO3M, where M is a cation, and 0-40% of the OH groups are unsubstd. (I) is not the palmitate ester of chondroitin sulphate or the laurate ester of dextran sulphate. The polysaccharide is pref. a monomer of xylose, arabinose, glucuronic acid etc. or partly hydrolysed starch, pectin etc. with molecular weight of up to 100 Kd.
USE/ADVANTAGE - The cpds. are more effective against virus diseases than polysaccharides which are only sulphated, and have a smaller **anticoagulant** effect. They are used in the prophylaxis and treatment of HIV (claimed), and other retroviruses.

L9 ANSWER 24 OF 39 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 91347751 MEDLINE
DOCUMENT NUMBER: 91347751
TITLE: Clinical and laboratory observations on polysaccharide sulphate (PSS) in 282 cases of ischemic cerebrovascular disease.
AUTHOR: Han Z Y; Wang Q A; Zeng G J
CORPORATE SOURCE: Department of Neurology, Qingdao Medical College.
SOURCE: CHINESE MEDICAL JOURNAL, (1991 Jul) 104 (7) 562-6.
Journal code: D3B. ISSN: 0366-6999.
PUB. COUNTRY: China

Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
ENTRY MONTH: 199112

AB **Polysaccharide sulphate** (PSS) is a new heparinoid drug. The **therapeutic** effect and laboratory findings in the treatment of 282 cases with ischemic cerebrovascular disease by PSS were analysed in this study. In treating patients with acute cerebral infarction, the effective rate (93.2%) and highly effective rate (62.9%) were both significantly higher in comparison with controls. Excellent results were also obtained in treating patients with cerebral infarction at late and sequela stage and patients with transient ischemic attack. Laboratory observations and animal experiments showed that PSS has **anticoagulative** and vasodilatory effects. It can also reduce blood viscosity and serum lipids. So PSS is an effective drug for the prevention and treatment of ischemic cerebrovascular diseases.

L9 ANSWER 25 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1990-260898 [34] WPIDS
DOC. NO. CPI: C1990-112986
TITLE: Sulphated polysaccharide D-HG - prepd. by depolymerisation of FGAG from sea-cucumber, used in treatment of diffuse intravascular **coagulation** and thrombosis.
DERWENT CLASS: B04
INVENTOR(S): FAN, H; MURANAKA, Y; NUMATA, K; OKA, T; SUZUKI, N; YAMANAKA, E; YU, S; FAN, H Z
PATENT ASSIGNEE(S): (TAIH-N) TAIHO FINE CHEM CO LTD; (TAIH) TAIHO PHARM CO LTD; (KOTA-N) KOTAI KASEI CO LTD; (KOTA-N) KOTAI KASEI KK
COUNTRY COUNT: 19
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 9008784	A	19900809	(199034)*		42
RW: AT BE CH DE DK ES FR GB IT LU NL SE					
W: AU CA JP KR US					
AU 9050325	A	19900824	(199046)		
EP 408770	A	19910123	(199104)		
R: AT BE CH DE ES FR GB IT LI LU NL SE					
JP 02502725	X	19910110	(199108)		
DD 297165	A5	19920102	(199222)#		
AU 634521	B	19930225	(199315)		
EP 408770	A4	19920318	(199521)		
US 5519010	A	19960521	(199626)		23
EP 408770	B1	19960605	(199627)	EN	22
R: AT BE CH DE DK ES FR GB IT LI LU NL SE					
DE 69027256	E	19960711	(199633)		

ES 2087907	T3	19960801	(199637)
JP 2714718	B2	19980216	(199812) 9
CA 2026992	C	19981110	(199904)
KR 9700528	B1	19970113	(199932)

APPLICATION DETAILS:

PATENT NO	KIND		APPLICATION	DATE
EP 408770	A		EP 1990-902694	19900206
AU 634521	B		AU 1990-50325	19900206
EP 408770	A4		EP 1990-902694	
US 5519010	A	CIP of	US 1990-582174	19900920
		CIP of	WO 1991-JP141	19910206
		Cont of	US 1991-746656	19910808
			US 1994-241667	19940512
EP 408770	B1		EP 1990-902694	19900206
			WO 1990-JP141	19900206
DE 69027256	E		DE 1990-627256	19900206
			EP 1990-902694	19900206
			WO 1990-JP141	19900206
ES 2087907	T3		EP 1990-902694	19900206
JP 2714718	B2		JP 1990-502725	19900206
			WO 1990-JP141	19900206
CA 2026992	C		CA 1990-2026992	19900206
KR 9700528	B1		WO 1990-JP141	19900206
			KR 1990-702212	19901006

FILING DETAILS:

PATENT NO	KIND		PATENT NO
AU 634521	B	Previous Publ.	AU 9050325
		Based on	WO 9008784
EP 408770	B1	Based on	WO 9008784
DE 69027256	E	Based on	EP 408770
		Based on	WO 9008784
ES 2087907	T3	Based on	EP 408770
JP 2714718	B2	Based on	WO 9008784

PRIORITY APPLN. INFO: JP 1989-28299 19890206
AN 1990-260898 [34] WPIDS
AB WO 9008784 A UPAB: 19990217
A sulphated polysaccharide (D-HG) and its pharmaceutically acceptable salts are new. D-HG has mol.wt. 3000-42,000 (by HPGPC); and is a white, amorphous, hygroscopic powder, soluble in water but insoluble in organic solvents such as ethanol or acetone. It is positive for the following colour reactions: Elson Morgan, carbazole/sulphuric acis, cysteine/sulphuric acid, orcinol/HC1 and

Azure A/metachromasia. It contains galactosamine/glucuronic acid/fucose/sulphate in the ratio 1:(0.8+/-0.2):(0.85+/-0.15):(3.4+/-0.9). The pref. mol. wt. is 4000-15,000.

D-HG is obtained by the depolymerisation of FGAG (or its salts) a sulphated polysaccharide with heparin activity, extracted from sea cucumbers such as Stichopus Japonicus selenka. After the depolymerisation the carbohydrate is sepd. by methods such as KOAc and/or ethanol pptn. gel filtration or ion-exchange.

USE - Treatment of diffuse intravascular **coagulation** (DIC) and thrombosis.

Dwg.2/2

ABEQ US 5519010 A UPAB: 19960705

Depolymerized sulphated polysaccharide, or a pharmaceutically acceptable salt thereof, said sulphated polysaccharide having been obtd. from the body wall of a sea cucumber or a salt thereof, said depolymerized sulphated polysaccharide having substantially no activity to cause platelet aggregation and having the following physicochemical properties:

[1] Mol. wt.: 4000-15000 Da (as measured by high performance GPC);

[2] Characteristic: white, amorphous, highly hygroscopic powder;

[3] Solubility: soluble in water but insoluble in ethanol and acetone;

[4] Specific rotation: [alpha]D20=-55 to -73deg. (C=1%);

[5] Colour reaction: Elson-Morgan reaction positive, Carbazole-sulphuric acid reaction positive, Cysteine-sulphuric acid reaction positive, Orcinol-hydrochloric acid reaction positive, Azure A metachromasia reaction positive;

[6] Analysis for compsn.: Galactosamine : Glucuronic acid : Fucose : Sulphate = 1:0.8plus or minus0.2:0.85plus or minus0.15:3.4plus or minus0.9.

Dwg.0/12

ABEQ EP 408770 B UPAB: 19960710

A sulfated polysaccharide (D-HG) and a pharmaceutically acceptable salt thereof obtainable by depolymerization of FGAG, which is a high-molecular weight sulfated polysaccharide comprising galactosamine, glucuronic acid, fucose, or a salt thereof, said sulfated polysaccharide (D-HG) having substantially no activity to cause platelet aggregation whereby the activity is measured at a concentration of 1 mg/ml as increase of light transmittance of a platelet suspension, and having the following physicochemical properties; (1) molecular weight: 3,000 to 24,300 daltons (as measured by high performance GPC) (2) characteristic: white, amorphous, highly hygroscopic powder (3) Solubility: soluble in water but insoluble in ethanol and acetone (4) Specific rotation: (a) 20D = -55 to -73 deg. (C = 1%) (5) Color reaction: as shown below Elson-Morgan reaction + Carbazole-sulfuric acid reaction + Cysteine-sulfuric acid reaction + Orcinol-hydrochloric acid reaction

+ Azure A metachromasia reaction + (6) Analysis for composition: as shown below Galactosamine : Glucuronic acid : Fucose : Sulfate in a molar ratio of 1 : 0.8 +/- 0.2 : 0.85 +/- 0.15 : 3.4 +/- 0.9. Dwg.0/2

L9 ANSWER 26 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1991-140796 [20] WPIDS
TITLE: Recovery and reuse of paper-making effluent - by **treating** with lime, **coagulant**, air, carboxymethyl **cellulose**, sodium and aluminium **sulphate** and activated carbon NoAbstract.
DERWENT CLASS: A97 D15 F09
INVENTOR(S): HUANG, L; TIAN, Y; WANG, S
PATENT ASSIGNEE(S): (QING-N) QINGDAO OCEANOGRAPH
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
CN 1044966	A	19900829	(199120)*		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
CN 1044966	A	CN 1989-105236	19890220

PRIORITY APPLN. INFO: CN 1989-105236 19890220
**** DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L9 ANSWER 27 OF 39 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1989:438666 BIOSIS
DOCUMENT NUMBER: BR37:83275
TITLE: ANTI-HIV-1 ACTIVITIES OF **SULFATED** MONOSACCHARIDES SMS AND **POLYSACCHARIDES** SPS **THERAPEUTIC** INDICES TI.
AUTHOR(S): BAGASRA O; LISCHNER H W; HALLIGEN G E; HEINS B
CORPORATE SOURCE: UNIV. MED. AND DENTISTRY N.J., CAMDEN, N.J.
SOURCE: MORISSET, R. A. (ED.). VE CONFERENCE INTERNATIONALE SUR LE SIDA: LE DEFI SCIENTIFIQUE ET SOCIAL; V INTERNATIONAL CONFERENCE ON AIDS: THE SCIENTIFIC AND SOCIAL CHALLENGE; MONTREAL, QUEBEC, CANADA, JUNE 4-9, 1989. 1262P. INTERNATIONAL DEVELOPMENT RESEARCH CENTRE: OTTAWA, ONTARIO, CANADA. ILLUS. PAPER, (1989) 0 (0), 660.
ISBN: 0-662-56670-X.
DOCUMENT TYPE: Conference

FILE SEGMENT: BR; OLD
LANGUAGE: English

L9 ANSWER 28 OF 39 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 89374127 MEDLINE
DOCUMENT NUMBER: 89374127
TITLE: Activation of human protein C by blood **coagulation** factor Xa in the presence of anionic phospholipids. Enhancement by sulphated polysaccharides.
AUTHOR: Freyssinet J M; Wiesel M L; Grunebaum L; Pereillo J M; Gauchy J; Schuhler S; Freund G; Cazenave J P
CORPORATE SOURCE: Unite 311 INSERM, Centre Regional de Transfusion Sanguine, Strasbourg, France.
SOURCE: BIOCHEMICAL JOURNAL, (1989 Jul 15) 261 (2) 341-8. Journal code: 9YO. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; Cancer Journals
ENTRY MONTH: 198912

AB The activation of protein C by thrombin is thought to occur at the endothelial cell surface in the presence of an essential membrane glycoprotein cofactor, thrombomodulin. In the present study it is demonstrated that, in the presence of hirudin, the most potent known inhibitor of thrombin, human protein C can be activated by human factor Xa (20 nM), but by a thrombomodulin-independent mechanism requiring only the presence of Ca2+ and phospholipid vesicles bearing a high proportion of negative charges (30-75% phosphatidylserine, depending on the conditions). At an optimal concentration of phosphatidylserine/phosphatidylcholine (1:1, w/w) of 75 microM, the apparent Km was 1 microM with a kcat. of 1 min-1. At 25 microM-phospholipid the Km was unchanged and the kcat. was 0.67 min-1. At either lipid concentration, increasing the density of negative charges by the adjunction of sulphated polysaccharides, like pentosan polysulphate or standard heparin at optimal concentrations of 2-5 micrograms/ml and 5-10 micrograms/ml respectively, resulted in a 4-fold increase of the kcat. without affecting the Km. Sulphated polysaccharides alone were poor promoters of protein C activation by factor Xa. In any case the presence of Ca2+ was essential, the dependence being sigmoidal with Hill coefficients ranging from 1.4 to 2.0. No significant activation of 4-carboxyglutamic acid-domainless protein C, a chymotrypic derivative lacking the phospholipid-binding domain, could be detected in the presence of phospholipids and Ca2+, with or without pentosan polysulphate. In a large molar excess, other phospholipid-binding entities like prothrombin fragments F1 or F1+2 could inhibit protein C activation by factor Xa, but pentosan polysulphate exerted a clear protective effect. Factor Xa

irreversibly inhibited at its active centre, but not di-isopropyl phosphoro-thrombin, behaved as an inhibitor but in a more complex manner than simple Michaelis-Menten kinetics. Among several derivatives of pentosan polysulphate or of heparin which were tested, those having the higher degree of sulphation and/or molecular mass were the most efficient in enhancing the rate of activation of protein C by factor Xa in the presence of phospholipids. These results suggest that human factor Xa, at physiological concentrations, could activate human protein C in the presence of anionic phospholipids and that this activation could be potentiated by **therapeutic** concentrations of **sulphated polysaccharides**.

L9 ANSWER 29 OF 39 MEDLINE
ACCESSION NUMBER: 90004709 MEDLINE
DOCUMENT NUMBER: 90004709
TITLE: Clinical, laboratory and animal experimental observations in **treating** 288 cases of ischemic cerebrovascular disease with **polysaccharide sulfate**.
AUTHOR: Han Z Y
SOURCE: CHUNG-HUA SHEN CHING CHING SHEN KO TSA CHIH [CHINESE JOURNAL OF NEUROLOGY AND PSYCHIATRY], (1989 Apr) 22 (2) 99-103, 127.
Journal code: D7Y. ISSN: 0412-4057.
PUB. COUNTRY: China
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: Chinese
ENTRY MONTH: 199001
AB The therapeutic effect and laboratory finding in the treatment of 288 cases of ischemic cerebrovascular disease with PSS were analysed. Positive therapeutic response to PSS in this series of cases was obtained in 92.0% and 62.2% of the treated cases showed excellent results. Effects in the treated patients were better than in the controls. The laboratory findings showed that PSS had obvious **anticoagulant** effect and decreased blood viscosity and serum contents of lipids. The results of animal experiments showed that PSS had the action of blood dilution, lowering blood viscosity and ameliorating **hypercoagulation**. PSS was considered to be a prospective, useful drug to prevent and treat ischemic cerebrovascular disease.

L9 ANSWER 30 OF 39 JAPIO COPYRIGHT 2000 JPO
ACCESSION NUMBER: 1988-088129 JAPIO
TITLE: BLOOD **COAGULATION** NINTH FACTOR ADSORBENT AND PURIFICATION OF SAID FACTOR BY USING SAID ADSORBENT
INVENTOR: NAGANO YOKO; TANI NOBUTAKA
PATENT ASSIGNEE(S): KANEGAFUCHI CHEM IND CO LTD, JP (CO 000094)
Searcher : Shears 308-4994

PATENT INFORMATION:

PATENT NO	KIND	DATE	ERA	MAIN IPC
JP 63088129	A	19880419	Showa	(4) A61K035-14

JP

APPLICATION INFORMATION

ST19N FORMAT:	JP1986-232231	19860930
ORIGINAL:	JP61232231	Showa

SOURCE: PATENT ABSTRACTS OF JAPAN, Unexamined Applications, Section: C, Sect. No. 524, Vol. 12, No. 316, P. 140 (19880826)

AN 1988-088129 JAPIO

AB PURPOSE: To obtain an adsorbent of blood **coagulation** ninth factor, which is a water-insoluble porous gel having a specific exclusion limit molecular weight, and a sulfur ester group on at least a part of the gel surface.
CONSTITUTION: An adsorbent of blood **coagulation** ninth factor, which is a water-insoluble porous gel (e.g. porous cellulose gel) consisting of hydroxyl group-containing compound having .gtoreq.50,000, preferably 100,000-2,000,000 exclusion limit molecular weight, and a sulfur ester group on at least a part of the gel surface. By using said adsorbent, a solution containing blood **coagulation** ninth factor is treated and then the factor is eluted, recovered and readily purified in good yield. The sulfur ester group-containing compound is fixed in water-insoluble porous gel by the bivalent bond and includes **sulfated polysaccharide**. The blood **coagulation** ninth factor is useful for **treating** bleeding of hemophilia B patient.

L9 ANSWER 31 OF 39 MEDLINE DUPLICATE 10

ACCESSION NUMBER: 88198980 MEDLINE

DOCUMENT NUMBER: 88198980

TITLE: Inhibition of allergic encephalomyelitis in rats by **treatment** with **sulfated polysaccharides**.

AUTHOR: Willenborg D O; Parish C R

CORPORATE SOURCE: Neurosciences Research Unit, Royal Canberra Hospital, Australia.

SOURCE: JOURNAL OF IMMUNOLOGY, (1988 May 15) 140 (10) 3401-5. Journal code: IFB. ISSN: 0022-1767.

PUB. COUNTRY: United States
Journal; Article; (JOURNAL ARTICLE)

LANGUAGE: English

FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals; Cancer Journals

ENTRY MONTH: 198808

AB A number of sulfated polysaccharides were tested for their ability

to inhibit passively induced experimental allergic encephalomyelitis (EAE) in rats. Heparin and fucoidan both completely inhibited passive EAE even when treatment was begun 3 days after transfer of cells. Pentosan sulfate was partially inhibitory whereas chondroitin-4-sulfate had no effect. Inhibition was not merely due to killing of the cells since active sensitization 14 days after cell transfer resulted in an early onset of disease indicating the persistence of transferred cells as memory cells. Although all the inhibitory polysaccharides are **anticoagulants**, it would appear that this function alone is not the reason for inhibition since a heparin preparation devoid of **anticoagulant** activity also partially inhibited EAE. Actively induced EAE was also significantly delayed by treatment with heparin. The results are discussed in terms of the polysaccharides inhibiting the enzymatic dependent movement of lymphocytes across central nervous system vascular endothelium.

L9 ANSWER 32 OF 39 MEDLINE
ACCESSION NUMBER: 89245616 MEDLINE
DOCUMENT NUMBER: 89245616
TITLE: [Removal of low density lipoproteins on dextrans sulfate in 2 patients with familial monogenic hypercholesterolemia].
Epuration des lipoproteines de basse densite (LDL) sur sulfate de dextran chez deux patients affectes d'une hypercholesterolemie monogenique familiale.
AUTHOR: Aubert I; Bombail D; Erlich D; Goy-Loeper J; Chanu B; Bussel A; Rouffy J
CORPORATE SOURCE: Service de Medecine Interne et Pathologie Vasculaire, Hopital Saint-Louis, Paris..
SOURCE: ANNALES DE MEDECINE INTERNE, (1988) 139 Suppl 1 72-6.
Journal code: 5FZ. ISSN: 0003-410X.
PUB. COUNTRY: France
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: French
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
AB Two patients-a 32 year old man with severe heterozygote familial hyperlipoproteinemia (FH) and a 9 years old girl with homozygote FH-were **treated** over eight months by LDL apheresis using dextran **sulfate cellulose** column (Liposorber, Kaneka, Japon). Plasma was separated from blood cells by filtration (TPE Cobe) or centrifugation (2,997 Cobe) through peripheral veins. An IV bolus of 10 IU/kg heparin was given together with local anti-**coagulation** with 55 g/l sodium citrate, 20 g/l citric acid at a ratio 1:25. Albumin supply was unnecessary. Plasma was removed every 2 weeks through liposorber LA 40 in the adult, and every week through liposorber LA 40 then 2 LA 15 in the child, mean plasma volume exchanged being 1.2 litres in the adult and 1.5 litres par

session in the child. EFFECTIVENESS: the DSC column removed on the average 60 p. 100 of total cholesterol (TC) and 65 p. 100 of LDL.C. Apoproteins B levels were reduced by 58 p. 100. After each procedure there was a rapid increase in lipid levels to about the 80 to 90 p. 100 of pretreatment value. In the adult, we obtained levels of TC of less than 300 mg/dl with exchanges every 2 weeks combined with an HMG CoA reductase inhibitor (40 mg/day); in the child, with exchanges every week the same inhibitor did not permit a prolongation of the interval between 2 aphereses. SPECIFICITY: this was confirmed by elution of DSC column bound lipoproteins by 0.1 mol/l NaCl solution. However, the average removal of HDL.C and apoprotein A1 was respectively 31 p. 100 and 32 p. 100. Triglycerides levels were also reduced (48 p. 100). SAFETY: this was good in both cases. Using the filtration technic, hypotension was reported; this side effect did not appear with centrifugation. In the child, we observed immediate type reactions: nasal obstruction, headache and abdominal pain. The change in plasma protein concentration was caused by dilution and/or non specific absorption. CONCLUSION: LDL apheresis alone or combined with an HMG CoA reductase inhibitor is a safe technic, simple to manage without special equipment and producing marked LDL.C level reduction. However, there is also a reduction of HDL-C levels. Despite its high cost, it is a promising new approach to the treatment of FH.

L9 ANSWER 33 OF 39 BIOSIS COPYRIGHT 2000 BIOSIS
ACCESSION NUMBER: 1987:403837 BIOSIS
DOCUMENT NUMBER: BA84:80017
TITLE: SUGAR CONSTITUENTS AND BLOOD-**ANTICOAGULANT** ACTIVITIES OF FUCOSE CONTAINING SULFATED POLYSACCHARIDES IN NINE BROWN SEAWEED SPECIES.
AUTHOR(S): NISHINO T; NAGUMO T
CORPORATE SOURCE: DEP. BIOPHYS., SCH. HYG. SCI., KITASATO UNIV., KANAGAWA 228, JPN.
SOURCE: NIPPON NOGEIKAGAKU KAISHI, (1987) 61 (3), 361-364. CODEN: NNKKAA.
FILE SEGMENT: BA; OLD
LANGUAGE: Japanese
AB Fucose-containing **sulfated polysaccharide**(SPS) fractions were prepared from 85% methanol-**treated** materials of nine different species of brown seaweeds. They were extracted with diluted hydrochloric acid (pH 2) at room temperature and the extracts fractionated with aqueous 3% cetylpyridinium chloride and 2% CaCl2 solutions. Electrophoresis indicated that each of the obtained fractions consisted of more than two polymeric components. Chemical analysis and g.l.c. showed that each SPS fraction contained fucose, galactose, mannose, xylose, glucuronic acid and half ester sulfate as constituents. The proportions of the constituents varied widely from one fraction to another. Blood-**anticoagulant** activity tests were conducted on each SPS

fraction with human or sheep plasma. The tests included thrombin time (TT), activated partial thromboplastin time (APTT), and anti-(factor Xa) activity in comparison with values of heparin (167 units/mg). When assayed for human plasma, all SPS fractions showed some TT(0-35 units/mg) and APTT (12-38 units/mg) activities, whereas anti-(factor Xa) activity was not remarkable in any SPS fraction. Among the SPS fractions tested, that of Ecklonia kurome exhibited the highest activity with respect to TT (35 units/mg) and APTT (38 units/mg). When assayed for sheep plasma, the fraction of E. kurome showed higher activity than that determined for human plasma (activity with respect to TT and APTT was 120 and 95 units/mg).

L9 ANSWER 34 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1985-301499 [48] WPIDS
DOC. NO. CPI: C1985-130794
TITLE: Cellulose-powder prodn. - by oxidn. of cellulose-sulphate with tri chloro-isocyanuric acid and alkali soln. followed by hydrolysis.
DERWENT CLASS: A11 A96 D22
INVENTOR(S): GOLDBERG, I R; LEONOVICH, A A; PERMINOVA, M I
PATENT ASSIGNEE(S): (LENL) LENINGRAD FORESTRY ACAD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
SU 1157038	A	19850523	(198548)*		3

PRIORITY APPLN. INFO: SU 1983-3636935 19830622
AN 1985-301499 [48] WPIDS
AB SU 1157038 A UPAB: 19930925
Typically, an optimum yield of 82.1% is obtd. of powder form cellulose sorbent. After chlorination, **cellulose sulphate** is **treated** with 1% alkali soln. and trichloroisocyanuric acid, 'TKHTSK' in 5% proportion to the wt. of cellulose, for about 1 hr. at room temp. The obtd. prod. is washed with water and hydrolysed for 30 mins. with 1.5% aq. soln. of hydrochloric acid at the b.pt. of the acid soln. The end prod. is washed and dried at 105 deg. C.

Yields of 78.4-82.0 are obtd. with the following concns. of components: alkali 1-10%, TKHTSK 1-6%, HCl 0.5-1.5%. Oxidn. temps. 20-60 deg. C.

USE/ADVANTAGE - Prodn. of sorbent materials with a wide range of biologically active properties for medical use, partic. treatment of septic **wounds** and dressings. The material has a higher sorption capacity than the known prod. and nearly 4.5 times lower content of impurities. Bul.19/23.5.85

Searcher : Shears 308-4994

0/0

L9 ANSWER 35 OF 39 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 86123582 MEDLINE
DOCUMENT NUMBER: 86123582
TITLE: The measurement of heparin and other **therapeutic sulphated polysaccharides** in plasma, serum and urine.
AUTHOR: Dawes J; Prowse C V; Pepper D S
SOURCE: THROMBOSIS AND HAEMOSTASIS, (1985 Oct 30) 54 (3) 630-4.
Journal code: VQ7. ISSN: 0340-6245.
PUB. COUNTRY: GERMANY, WEST: Germany, Federal Republic of
Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198605
AB The competitive binding assay described will specifically and accurately measure concentrations of administered heparin in biological fluids with a sensitivity of 60 ng ml-1. Neither endogenous glycosaminoglycans, nor plasma proteins such as ATIII and PF4 interfere in the assay. Semi-synthetic highly sulphated heparinoids and LMW heparin can also be measured. Using this assay heparin clearance followed simple first-order kinetics over the dose range 100-5,000 units, but the half-life was strongly dose-dependent. There was good correlation with heparin activity measurements by APTT and anti-Xa **clotting** assays. Plasma concentrations were measurable for at least 5 h following subcutaneous injection of 10,000 units of heparin. Excretion in the urine could be followed after all but the lowest intravenous dose. This assay, used in conjunction with measurements of heparin **anticoagulant** activity, will be valuable in the elucidation of mechanisms of action of heparin and the heparinoids, and in the assessment and management of problems related to heparin therapy.

L9 ANSWER 36 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1984-007135 [02] WPIDS
DOC. NO. CPI: C1984-002889
TITLE: Pure dermatan sulphate and heparan sulphate prodn. - from mixed muco polysaccharide by fractional salt pptn. and enzyme treatment.
DERWENT CLASS: B04
INVENTOR(S): CAPPELLETT, R; ORZALESI, G; VOLPATO, I
PATENT ASSIGNEE(S): (SOIT) SOC ITAL BRIT MANETTI ROBERTS; (ITBR-N) SOC ITALO-BRIT MANE
COUNTRY COUNT: 11
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG

EP 97625	A	19840104 (198402)*	EN	20
R: AT BE CH DE FR GB LI LU NL SE				
EP 97625	B	19880330 (198813)	EN	
R: AT BE CH DE FR GB LI LU NL SE				
DE 3376116	G	19880505 (198819)		
IT 1189298	B	19880204 (199047)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 97625	A	EP 1983-830122	19830617

PRIORITY APPLN. INFO: IT 1982-48666 19820618

AN 1984-007135 [02] WPIDS

AB EP 97625 A UPAB: 19930925

Prodn. comprises first treating an aq. soln. contg. a mixt. of mucopolysaccharides with a water-soluble NH4 or K salt to a concn. of 70-90% satn. at 25 deg.C. The first ppte., formed at room temp., is pure dermatan sulphate (I) and is recovered, then the residual soln. cooled to 0 deg.C. The ppte. formed at 0 deg.C, which is chondroitin sulphate A, is removed and the residual soln. desalted, then water eliminated to give a solid contg. heparon sulphate (Icontaminated with other glycosaminoglycans. This mixt. is treated with chondroitinase ABC to destroy the impurities, leaving pure (II).

The salt used in the first step is esp. K or NH4 acetate, KCl or K2SO4, esp. to 80% satn. The desalting step is by dialysis, solvent pptn. or ultrafiltration. (I) is useful as a topical antioedema, anti-congestive and healing agent and (II) has a specific fibrinolytic action (no effect on **coagulation** or platelets) when administered orally at 1-30 mg per kg per day. The method is suitable for large-scale operation and provides pure cpds. from starting materials of variable compsn. Only small amts. of enzyme are needed.

The starting soln. contains 10-200 g per l glycosaminoglycans and after treating with salt is allowed to stand for 48 hr. before recovering pptd. (I). The clear filtrate is allowed to stand at 0 deg.C for a further 48 hr. before removing the second ppte., which can be discarded or used to produce other mucopolysaccharides. (No example of the prepn. process is given). (I) was applied, twice a day, to superficial skin lesions with various degrees of ulceration and difficulty of healing. Treated lesions took 30% less time to heal with better development of connective cicatricial tissue; improved macroscopic condition after repair, and absence of fibrous evolution, telangiectasis and pigmentation.

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L9 ANSWER 37 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1983-793505 [42] WPIDS
DOC. NO. CPI: C1983-101633
TITLE: Prepn. of biologically active polysaccharide - treating carboxymethyl cellulose with chloro-sulphonic acid to increase anti **coagulating** activity.
DERWENT CLASS: A96 B04
INVENTOR(S): BARSOVA, L I; GALBRAIKH, L S; VIKHOREVA, G A
PATENT ASSIGNEE(S): (MOTD) MOSC TEXTILE INST
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
SU 981322	A	19821215	(198342)*		3

PRIORITY APPLN. INFO: SU 1981-3310928 19810508
AN 1983-793505 [42] WPIDS
AB SU 981322 A UPAB: 19930925
Prepn. of water soluble linear polysaccharide (contg. functional grps. of acidic character e.g. for use as biologically active cpds. in biology and medicine) gives increased **anticoagulating** activity and simplifies the process by: using carboxymethyl-cellulose(CMC) as the polysaccharide; using chlorosulphonic acid (CSA) as the sulphating agent; treating for 0.5-1 hr. with 16-29.4% CSA soln. in dimethyl formamide(DMF) at 20-25 deg. C using ratio CSA soln.: CMC= (15.5-18.8):1. As previously, the process involves **treatment** of **polysaccharides** with **sulphating** agent in DMF.

The proposed method gives prod. with acidic **anticoagulating** activity 69-74 units/mg; non-acute toxicity; stability similar to that of heparin. The process uses more accessible reagents and milder conditions.

0/0

L9 ANSWER 38 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1981-87610D [48] WPIDS
TITLE: **Anticoagulant**, antithrombotic, hypolipaemic sulphated polysaccharide - prepd. by depolymerisation of heparin ester(s), have longer duration of activity and are less prone to haemorrhage than heparin.
DERWENT CLASS: B05
INVENTOR(S): MARDIGUIAN, J
PATENT ASSIGNEE(S): (PHAU) PHARMINDUSTRIE

COUNTRY COUNT: 20
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 40144	A	19811118	(198148)*	FR	33
R: BE CH DE FR GB IT LI LU NL SE					
FR 2482611	A	19811120	(198152)		
NO 8101632	A	19811207	(198201)		
DK 8102119	A	19811221	(198203)		
FI 8101469	A	19811231	(198204)		
PT 73024	A	19820113	(198207)		
JP 57010601	A	19820120	(198209)		
ZA 8103176	A	19820401	(198225)		
EP 40144	B	19840808	(198432)	FR	
R: BE CH DE FR GB IT LI LU NL SE					
IL 62866	A	19840629	(198432)		
DE 3165361	G	19840913	(198438)		
CA 1181744	A	19850129	(198509)		
HU 34769	T	19850429	(198526)		
JP 60051482	B	19851114	(198550)		
AT 8102136	A	19870415	(198719)		
DK 168824	B	19940620	(199428)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 40144	A	EP 1981-400728	19810508
DK 168824	B	DK 1981-2119	19810513

FILING DETAILS:

PATENT NO	KIND		PATENT NO
DK 168824	B	Previous Publ.	DK 8102119

PRIORITY APPLN. INFO: FR 1980-10791 19800514
AN 1981-87610D [48] WPIDS
AB EP 40144 A UPAB: 19970926
Mixts. of sulphated polysaccharides, which have the general structure of constitutive polysaccharides of heparin and have acid gps. in free or salified form (pref. sodium, magnesium or calcium salts) are characterised in that the constitutive polysaccharides have an ethylenic double bond at one end of their chain and in that the mixts., in the form of their sodium salts have the following characteristics (1) % of sulphur 9-13.5 %; (2) % of nitrogen 1.8-2.5%, (3) % of uronic acids 20-30%; (4) 2000-10000 daltons and (5) specific rotation in aq. soln. at 20 deg.C (alpha) D20 +25 deg.

to +55 deg.

Anticoagulants and antithrombotic agents used for **treatment** and prevention of thromboses and as hypolipaemic agents. The **sulphated polysaccharides** of the present invention have longer duration of activity than does heparin and cause less side- effects (haemorrhage). The partic. those with mean mol. wt. less than 7000 daltons, have antithrombotic activity superior to their **anticoagulant** activity and have similar toxicity to heparin when administered subcutaneously.

ABEQ EP 40144 B UPAB: 19930915

Mixts. of sulphated polysaccharides having the general structure of the polysaccharides present in heparin, whose acid gps. are in the free form or converted into salt, form, the polysaccharides present in the mixt. having an ethylenic double bond at one end of their chains. The mixts. in Na salt form, have the following properties: S content 9-13.5% N content 1.8-2.5%, uronic acid content 20-30%, wt. ave. mol. wt. 2000-10000 Daltons, specific rotatory power in aq. soln. at 20 deg.C (alpha D20) + 25 deg. to + 55 deg.

Pref. the polysaccharides present in the mixt. correspond to formula (I) (R = H or carboxylic gp. in acid form or converted into salt form, R' is OH or sulphate gp. in acid or salt form, R1 = OH or sulphate gp. in acid or salt form, R2 = a sulphonate gp.in acid or salt form, or an acetyl gp. -O- is an oxygen bridge, the links G represent glucosamine type links present in the structure of heparin, the links U represent uronic acid type links (D-glucuronic acid, L-iduronic acid, and sulphated L-iduronic acid) present in the structure of heparin, and n = 3-20, the acid gps. o the polysaccharides being in free acid or salt form).

The mixts. are prepd. by reacting a water-soluble ester of heparin, produced by partial or complete esterification of the heparin carboxy gps. with an inorganic base or water soluble organic base in an aq. medium and at 20-80 deg.C, and separating the resulting depolymerisation prod.

USE - The prods. are useful pharmaceutical agents for treatment of thrombosis and hyperlipaemia.

L9 ANSWER 39 OF 39 WPIDS COPYRIGHT 2000 DERWENT INFORMATION LTD
ACCESSION NUMBER: 1974-88040V [51] WPIDS
TITLE: Depolymised **pectin sulphate** prodn. - for use in long-term **treatment** of hypocholesteraemia.
DERWENT CLASS: B04
PATENT ASSIGNEE(S): (NNSH) NIPPON SHINYAKU CO LTD
COUNTRY COUNT: 1
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 49043937	B	19741125	(197451)*		

Searcher : Shears 308-4994

PRIORITY APPLN. INFO: JP 1970-126756 19701228
AN 1974-88040V [51] WPIDS
AB JP 74043937 B UPAB: 19930831
Depolymsd. pectin sulphate is produced by subjecting a commercially available pectin to depolymsn. in 10 to 60% aq. lower alkanol or glycerin contg. an alkali equiv. to the carboxyl gps of the pectin treated, at 40 degrees C to reflux temp. and subjecting the resulting depolymsd. pectin (polymsn. degree: 5 to 20) to conventional sulphation. Prod. has no anti-**coagulant** activity.

FILE 'CAPLUS' ENTERED AT 15:19:54 ON 14 AUG 2000
L10 1 SEA ABB=ON PLU=ON L6 AND (DRESSING(5A)(MATERIAL OR FABRIC) OR TISSUE(3A)IMPLANT?)
L11 4 SEA ABB=ON PLU=ON L6 AND (DRESSING OR TISSUE(3A)IMPLANT?)
L12 2 SEA ABB=ON PLU=ON (L10 OR L11) NOT L7

L12 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1983:221864 CAPLUS
DOCUMENT NUMBER: 98:221864
TITLE: Coating for bioprosthetic device
INVENTOR(S): Nimni, Marcel E.; Cheung, David T.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 7 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4378224	A	19830329	US 1980-188964	19800919
CA 1209051	A1	19860805	CA 1983-424534	19830325
EP 121008	A2	19841010	EP 1983-301774	19830329
EP 121008	A3	19850327		

R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE
PRIORITY APPLN. INFO.: US 1980-188964 19800919
AB A coating for heart valves and other prosthetics has improved biophys. stability after the device is implanted in a host organism. The increased stability results from the creation of a 3-dimensional matrix of a primary structural component of the device and covalently attached calcification inhibitors. Thus, animal tissues are processed, treated with glutaraldehyde, rinsed in phosphate-buffer saline, treated with hexanediamine at pH 7.4, and

incubated for 4 h. The tissues are further treated with 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide-HCl soln. at pH 4.9, incubated for 30 min-10 h and placed in neutral phosphate-buffered saline soln. The tissues are further **treated** with a **sulfated polysaccharide**, incubated for 12 h and then with 1% by wt. of heparin. The treated tissues are fully transferred to a final storage, neutral PBS soln. contg. 0.4% glutaraldehyde, 0.2-2% HCHO and 30% alc.

L12 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1976:8844 CAPLUS
DOCUMENT NUMBER: 84:8844
TITLE: Body fluid-impermeable films for sanitary napkins
INVENTOR(S): Tunc, Deger
PATENT ASSIGNEE(S): Johnson and Johnson, USA
SOURCE: Ger. Offen., 33 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2461870	A1	19750717	DE 1974-2461870	19741230
US 3897782	A	19750805	US 1974-431455	19740107
NO 7404492	A	19750708	NO 1974-4492	19741212
DK 7406625	A	19750825	DK 1974-6625	19741218
AU 7476730	A1	19760624	AU 1974-76730	19741220
SE 7500061	A	19750708	SE 1975-61	19750103
FI 7500016	A	19750708	FI 1975-16	19750106
FR 2256748	A1	19750801	FR 1975-253	19750106
BE 824174	A1	19750707	BE 1975-152206	19750107
NL 7500174	A	19750709	NL 1975-174	19750107
ZA 7500128	A	19760825	ZA 1975-128	19750107
NO 7503401	A	19750708	NO 1975-3401	19751008
PRIORITY APPLN. INFO.:			US 1974-431455	19740107
			NO 1974-4492	19741212

AB Films impermeable to body fluids (blood and urine), but which decompd. in water, as when flushed in a toilet, were prepd. from cellulose C1-4 acyl ester sulfate resins having a degree of sulfate substitution of 0.27-0.36. For example, an aq. cellulose slowly was **treated** with H2SO4 and Na acetyl **sulfate**, and the **cellulose sulfate** deriv. was acylate with acetic anhydride to give a soln. of sodium cellulose acetate sulfate [51910-28-2], with an SO42- substitution degree of 0.36. The soln. was poured onto a silicone release paper and evapd. to give a light-permeable flexible film. The compn. of the cellulose ester

sulfate obtained was varied by changing the concns. of H2SO4 and acetic anhydride used. The use of these films in flushable sanitary napkins and similar products is illustrated.

(FILE 'MEDLINE, BIOSIS, EMBASE, WPIDS, CONFSCI, SCISEARCH, JICST-EPLUS, JAPIO' ENTERED AT 15:21:28 ON 14 AUG 2000)

L13 2 S L10
L14 2 S L11
L15 0 S (L13 OR L14) NOT L8

(FILE 'USPATFULL' ENTERED AT 15:25:43 ON 14 AUG 2000)

L16 137 SEA ABB=ON PLU=ON L5(10A)(TREAT? OR THERAP?)
L17 12 SEA ABB=ON PLU=ON L16(S)(L4 OR MATRIX(W)(METALLOPROTEINASE OR METALLO PROTEINASE) OR MMP OR WOUND OR ?COAGULAT? OR ?COAGULANT? OR ?CLOT? OR TISSUE(3A)IMPLANT? OR DRESSING)

L17 ANSWER 1 OF 12 USPATFULL

ACCESSION NUMBER: 1999:40402 USPATFULL
TITLE: Pharmaceutical composition of complex carbohydrates and essential oils and methods of using the same
INVENTOR(S): Brown, Harold G., Parkville, MO, United States
PATENT ASSIGNEE(S): Dermal Research Laboratories, Inc., Parkville, MO, United States (U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5888984	19990330	
APPLICATION INFO.:	US 1994-241692	19940512	(8)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Lee, Howard C.
LEGAL REPRESENTATIVE: Birch, Stewart, Kolasch & Birch, LLP
NUMBER OF CLAIMS: 65
EXEMPLARY CLAIM: 1
LINE COUNT: 1551
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The invention discloses the discovery that a pharmaceutical composition containing complex carbohydrates and natural or synthetic essential oils can work effectively as a topical pharmaceutical composition. Such pharmaceutical compositions reduce inflammation, assist in wound healing, protect against bruising, relieve itching, relieve pain and swelling and treat topical bacterial infections such as acne and decubitus ulcers. Such pharmaceutical compositions can be administered to mammals including humans. Also included in this invention are methods to deliver topically applied macromolecules into the tissue of mammals and methods of blocking the adhesion cascade.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/054.000
INCLS: 424/195.100; 424/DIG.013; 514/053.000; 514/055.000; 514/056.000; 514/061.000; 514/062.000; 514/885.000; 514/886.000
NCL NCLM: 514/054.000
NCLS: 424/195.100; 424/DIG.013; 514/053.000; 514/055.000; 514/056.000; 514/061.000; 514/062.000; 514/885.000; 514/886.000

L17 ANSWER 2 OF 12 USPATFULL
ACCESSION NUMBER: 1998:87587 USPATFULL
TITLE: Genital lubricant with zinc salt, labelled as anti-viral agent
INVENTOR(S): Kelly, Patrick D., 33 Berry Oaks, St. Louis, MO, United States 63122

	NUMBER	DATE
PATENT INFORMATION:	US 5785054	19980728
APPLICATION INFO.:	US 1995-464273	19950605 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-57001, filed on 3 May 1993, now patented, Pat. No. US 5499377, issued on 12 Mar 1996 And Ser. No. US 1994-361967, filed on 22 Dec 1994, now patented, Pat. No. US 5589551 which is a continuation-in-part of Ser. No. US 1993-56480, filed on 3 May 1993, now abandoned , said Ser. No. US -57001 And Ser. No. US -56480 , each Ser. No. US - which is a continuation-in-part of Ser. No. US 1991-737169, filed on 29 Jul 1991, now patented, Pat. No. US 5208031, issued on 4 May 1993 which is a continuation-in-part of Ser. No. US 1990-528495, filed on 25 May 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-362058, filed on 6 Jun 1989, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Brown, Michael A.
LEGAL REPRESENTATIVE: Kelly, Patrick D.
NUMBER OF CLAIMS: 6
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 1407
AB This invention relates to an article of manufacture including a genital lubricant containing a selected non-irritating, water-soluble zinc salt at an anti-viral concentration, within a package that is provided with a label indicating that the lubricant is effective as an anti-viral agent against at least one

type of sexually transmitted virus (such as genital herpes viruses, human immunodeficiency viruses, hepatitis viruses, or papilloma viruses). One such lubricant includes a lubricant gel in a plastic-walled tubular package, for use with or without a condom; another such lubricant includes a condom lubricant, coated on a condom and sealed along with the condom inside a disposable plastic pouch. The zinc salt must be water-soluble and have substantial dissociation rates to release divalent zinc ions, and the lubricant must not cause genital irritation or other adverse effects, even if used repeatedly over a period of months or years. The zinc-containing lubricants described herein can reduce the risk that a previously uninfected person will become infected by sexually transmitted viruses, and the labelling information will help promote efficacy and slow the spread of incurable viruses.

INCL INCLM: 128/842.000
NCL NCLM: 128/842.000

L17 ANSWER 3 OF 12 USPATFULL
ACCESSION NUMBER: 97:59188 USPATFULL
TITLE: Low molecular weight sulfated polysaccharides and uses thereof
INVENTOR(S): Shi, Guan Hua, Oingdao, China
PATENT ASSIGNEE(S): Ocean University of Oingdao, Oingdao, China (non-U.S. corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 5646130	19970708	
APPLICATION INFO.:	US 1995-498013	19950630	(8)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Kight, John
ASSISTANT EXAMINER: Lee, Howard C.
LEGAL REPRESENTATIVE: Seidman, StephanieBrown Martin Haller & McClain
NUMBER OF CLAIMS: 27
EXEMPLARY CLAIM: 1
LINE COUNT: 1464
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An oligosaccharide containing about 20 monosaccharide units is provided. This oligosaccharide designated (M.sub.9 G).sub.2 is a copolymer .beta.-D-(1.fwdarw.4) connected mannuronopyranose units and an .alpha.-L-(1.fwdarw.4) connected guluronic acid unit at a ratio of 9:1. In addition, 40-60% of the carboxylic functional groups are esterified with propanol, 2-propanol or methanol, and substantially all of the C.sub.2 carbons and about 50% of the C.sub.3 positions of the residues are sulfated, such that the resulting compound contains about 7-13% organic sulfur. The compounds are used for the prevention and therapy of thrombosis-induced ischemic vascular diseases of the heart and the

central nervous system, for treating acute thrombosis-induced brain infarction and in coronary ischemia-induced angina, and for treating hyperlipoproteinemia and lowering the relative amount of cholesterol.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/054.000
INCLS: 514/821.000; 514/822.000; 514/824.000; 514/885.000; 536/123.000; 536/123.100; 536/124.000; 536/128.000
NCL NCLM: 514/054.000
NCLS: 514/821.000; 514/822.000; 514/824.000; 514/885.000; 536/123.000; 536/123.100; 536/124.000; 536/128.000

L17 ANSWER 4 OF 12 USPATFULL
ACCESSION NUMBER: 97:9787 USPATFULL
TITLE: Genital lubricants containing zinc as an anti-viral agent
INVENTOR(S): Kelly, Patrick D., 33 Berry Oaks, St. Louis, MO, United States 63122

	NUMBER	DATE
PATENT INFORMATION:	US 5599551	19970204
APPLICATION INFO.:	US 1994-361967	19941222 (8)

DISCLAIMER DATE: 20100504
RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-56480, filed on 3 May 1993, now abandoned which is a continuation-in-part of Ser. No. US 1991-737169, filed on 29 Jul 1991, now patented, Pat. No. US 5208031, issued on 4 May 1993 which is a continuation-in-part of Ser. No. US 1990-528495, filed on 25 May 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-362058, filed on 6 Jun 1989, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Azruru, Carlos
LEGAL REPRESENTATIVE: Kelly, Patrick D.
NUMBER OF CLAIMS: 5
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1263
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to an article of manufacture comprising an aqueous gel containing a selected zinc salt contained within a deformable plastic-walled tubular container, for convenient and consistent use as a topical genital lubricant during acts of sexual intercourse. The zinc salt must be organic, water-soluble, and have substantial dissociation rates to release divalent zinc ions. Suitable zinc salts include zinc acetate, zinc propionate,

zinc butyrate, zinc formate, zinc gluconate, zinc glycerate, zinc glycolate, and zinc lactate. The gel must also contain a thickening agent (such as chemically treated cellulose) and a lubricating agent (such as glycerin), and it must be free of heparin, dextran sulfate, or any other anti-coagulant or other component which poses a substantial risk of adverse effects if the lubricant is used frequently and repeatedly over a period of months or years. The zinc-containing lubricants described herein can reduce the risk that a previously uninfected person will become infected by genital herpes viruses, and possibly by HIV, hepatitis, or papilloma viruses or other sexually transmitted pathogens, during or after intercourse with an infected partner.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 424/405.000
INCLS: 424/401.000; 424/407.000; 424/614.000; 514/774.000; 514/777.000; 514/781.000; 514/785.000; 514/786.000; 514/886.000; 514/931.000; 514/934.000; 514/944.000; 514/966.000; 514/967.000; 514/968.000; 514/969.000
NCL NCLM: 424/405.000
NCLS: 424/401.000; 424/407.000; 424/614.000; 514/774.000; 514/777.000; 514/781.000; 514/785.000; 514/786.000; 514/886.000; 514/931.000; 514/934.000; 514/944.000; 514/966.000; 514/967.000; 514/968.000; 514/969.000

L17 ANSWER 5 OF 12 USPATFULL
ACCESSION NUMBER: 96:72921 USPATFULL
TITLE: Method for reducing risk of infection by sexually transmitted viruses
INVENTOR(S): Kelly, Patrick D., 33 Berry Oaks, St. Louis, MO, United States 63122

	NUMBER	DATE
PATENT INFORMATION:	US 5545673	19960813
APPLICATION INFO.:	US 1995-368041	19950103 (8)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-57110, filed on 3 May 1993, now abandoned which is a division of Ser. No. US 1991-737169, filed on 29 Jul 1991, now patented, Pat. No. US 5208031, issued on 14 May 1993 , said Ser. No. US -57110 which is a continuation-in-part of Ser. No. US -737169 which is a continuation-in-part of Ser. No. US 1990-528495, filed on 25 May 1990, now abandoned which is a continuation-in-part of Ser. No. US 1989-362058, filed on 6 Jun 1989, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Azpuru, Carlos
Searcher : Shears 308-4994

LEGAL REPRESENTATIVE: Kelly, Patrick D.
NUMBER OF CLAIMS: 7
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 1264
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is disclosed for reducing the risk of infection by sexually transmitted viruses. This method involves spreading a lubricant fluid containing a selected zinc salt across the surfaces of the penis or vagina, before intercourse, in a manner that causes the lubricant to coat and remain in contact with the genital surfaces throughout intercourse. The zinc salt should be organic, water-soluble, non-irritating, physiologically acceptable, and have a high rate of dissociation, which allows it to release substantial quantities of divalent zinc ions. Suitable zinc salts include zinc acetate, zinc propionate, zinc butyrate, zinc formate, zinc gluconate, zinc glycerate, zinc glycolate, and zinc lactate. A preferred carrier fluid comprises a lubricant gel, which also contains water, a thickening agent (such as chemically treated cellulose) and a lubricating agent (such as glycerin). The lubricant formulation must be free of heparin, dextran sulfate, or any other component that poses a substantial risk of adverse effects if the lubricant is used frequently and repeatedly over a period of months or years. The lubricants disclosed herein preferably should be used with condoms, to enhance the risk-reducing effectiveness of condoms and provide maximum protection; however, these lubricants can also be used without condoms, if desired.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/772.300
INCLS: 514/772.600; 514/774.000; 514/777.000; 514/781.000; 514/785.000; 514/786.000; 514/886.000; 514/931.000; 514/944.000; 514/966.000; 514/967.000; 514/968.000; 514/969.000; 424/401.000; 424/405.000
NCL NCLM: 514/772.300
NCLS: 424/401.000; 424/405.000; 514/772.600; 514/774.000; 514/777.000; 514/781.000; 514/785.000; 514/786.000; 514/886.000; 514/931.000; 514/944.000; 514/966.000; 514/967.000; 514/968.000; 514/969.000

L17 ANSWER 6 OF 12 USPATFULL
ACCESSION NUMBER: 96:43661 USPATFULL
TITLE: Sulfated polysaccharide, pharmaceutically acceptable salt thereof, process for preparing same and medicament containing same as effective component
INVENTOR(S): Fan, Hui-Zeng, Tianjin, China
Yu, Song, Tianjin, China
Searcher : Shears 308-4994

Yamanaka, Etsuji, Honjo, Japan
Numata, Kazuhiro, Honjo, Japan
Oka, Toshinori, Itano, Japan
Suzuki, Norihiko, Tokushima, Japan
Muranaka, Yoshiyuki, Tokushima, Japan
PATENT ASSIGNEE(S): Taiho Pharmaceutical Co., Ltd., Tokyo, Japan (non-U.S. corporation)
Kotai Kasei Co., Ltd., Kodama, Japan (non-U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5519010	19960521
APPLICATION INFO.:	US 1994-241667	19940512 (8)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1991-746656, filed on 8 Aug 1991, now abandoned which is a continuation-in-part of Ser. No. US 1990-582174, filed on 20 Sep 1990, now abandoned

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1989-28299	19890602

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Robinson, Douglas W.
ASSISTANT EXAMINER: White, Everett
LEGAL REPRESENTATIVE: Nikaido, Marmelstein, Murray & Oram
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1,12
NUMBER OF DRAWINGS: 12 Drawing Figure(s); 12 Drawing Page(s)
LINE COUNT: 989
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides a sulfated polysaccharide (D-HG), a pharmaceutically acceptable salt thereof, a process for preparing the same and a medicament containing the same as the effective component for DIC (disseminated intravascular coagulation) and thrombosis, the sulfated polysaccharide (D-HG) being prepared by depolymerization of FGAG (a sulfated polysaccharide extracted from a body wall of a sea cucumber with such activities as those of heparin) or a salt thereof and having the following physicochemical properties:

[1] Molecular weight:

3,000 to 42,000 (as measured by high performance GPC)

[2] Characteristic:

white, amorphous, highly hygroscopic powder

[3] Solubility:

soluble in water but insoluble in ethanol, acetone and like organic solvents

[4] Specific rotation:

[.alpha.].sub.D.sup.20 =-55 to -73.degree. (C=1%)

[5] Color reaction: as shown below

Elson-Morgan reaction +
Carbazole-sulfuric acid reaction
+
Cystein-sulfuric acid reaction
+
Orcinol-hydrochloric acid reaction
+
Azure A metachromasia reaction
+

[6] Analysis for composition: as shown below

Galactosamine: Glucuronic acid: Fucose: sulfate=1:0.8.+-.0.2:0.85.+-.0.15:3.4.+-.0.9.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 514/054.000
INCLS: 536/017.200; 536/017.500; 536/054.000; 536/118.000; 536/123.000; 536/124.000
NCL NCLM: 514/054.000
NCLS: 536/017.200; 536/017.500; 536/054.000; 536/118.000; 536/123.000; 536/124.000

L17 ANSWER 7 OF 12 USPATFULL
ACCESSION NUMBER: 92:89178 USPATFULL
TITLE: Sulfated tannins and their salts
INVENTOR(S): Hirayama, Fukushi, Tokyo, Japan
Uchino, Keijiro, Kanagawa, Japan
Iwamoto, Masaya, Kanagawa, Japan
Fukuchi, Akira, Kanagawa, Japan
Hiramoto, Masashi, Kanagawa, Japan
Yamamoto, Hirokazu, Tokyo, Japan
Yamamoto, Naoki, Yamaguchi, Japan
Nakashima, Hideki, Yamaguchi, Japan
Kadota, Shigenobu, Tokyo, Japan
Ogawara, Hiroshi, Tokyo, Japan
Searcher : Shears 308-4994

PATENT ASSIGNEE(S): Yamanouchi Pharmaceutical Co., Ltd., Tokyo, Japan (non-U.S. corporation)
NipponFlour Mills Co., Ltd., Tokyo, Japan (non-U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5159069	19921027
APPLICATION INFO.:	US 1989-450912	19891214 (7)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1988-320947	19881220
	JP 1989-121700	19890516

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Brown, Johnnie R.
ASSISTANT EXAMINER: White, Everett
LEGAL REPRESENTATIVE: Burgess, Ryan & Wayne
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 13 Drawing Figure(s); 13 Drawing Page(s)
LINE COUNT: 1113
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Sulfated tannins or salts thereof are herein disclosed. These compounds can be prepared by a method which comprises reacting tannin with a sulfonating agent under a basic condition. These compounds show antiviral activity and reverse transcriptase inhibitor, effects and can be used to treat patients infected with a variety of virus such as AIDS virus, herpesvirus, influenza virus or rhinovirus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 536/118.000
INCLS: 558/026.000; 536/018.100; 536/018.200; 536/119.000
NCL NCLM: 536/118.000
NCLS: 536/018.100; 536/018.200; 536/119.000; 558/026.000

L17 ANSWER 8 OF 12 USPATFULL
ACCESSION NUMBER: 83:25225 USPATFULL
TITLE: Cellulose sulfate salt having anti-coagulating action and process for preparing same
INVENTOR(S): Okajima, Kunihiko, Takatsuki, Japan
Kamide, Kenji, Ikoma, Japan
Matsui, Toshihiko, Takatsuki, Japan
PATENT ASSIGNEE(S): Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan (non-U.S. corporation)

	NUMBER	DATE

Searcher : Shears 308-4994

PATENT INFORMATION: US 4389523 19830621
APPLICATION INFO.: US 1981-324918 19811125 (6)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1980-165786	19801127

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Clingman, A. Lionel
NUMBER OF CLAIMS: 11
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 1 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 988
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A cellulose sulfate salt having a heparinic action is provided, which satisfies requirements of 0.8.ltoreq.<<F>>.ltoreq.2.6, <<f.sub.2 >>.gtoreq.<<f.sub.3 >> and <<f.sub.2 >>.gtoreq.<<f.sub.6 >> wherein <<f.sub.2 >>, <<f.sub.3 >> and <<f.sub.6 >> stand for probability of substitution of atoms H in the OH groups bonded to the C.sub.2, C.sub.3 and C.sub.6 positions of the glucopyranose ring unit by sulfuric acid radicals, respectively, and <<F>> stands for the total substitution degree which is the sum of <<f.sub.2 >>, <<f.sub.3 >> and <<f.sub.6 >>. The cellulose sulfate salt is prepared by reacting a cellulose having a crystal form I with an SO.sub.3 /amine or SO.sub.3 /amide complex in an amount of 2 to 4 mole equivalents per glucose unit of the cellulose at -10.degree. C. to 40.degree. C. to form a gelatinous product; adding water to the gelatinous product in an amount 0.1 to 5 times the amount of the starting cellulose used for the reaction; treating the mixture at a high temperature to relatively reduce the values of <<f.sub.6 >> and <<f.sub.3 >> among the values of <<f.sub.2 >>, <<F.sub.3 >> and <<f.sub.6 >>; neutralizing, precipitating and drying the so obtained crude cellulose sulfate; dissolving the crude cellulose sulfate in water again; treating the solution with an adsorbent; and subjecting the treated cellulose sulfate to precipitation, drying, re-dissolution, dialysis, precipitation and then drying.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 536/059.000
INCLS: 536/118.000; 536/122.000
NCL NCLM: 536/059.000
NCLS: 536/118.000; 536/122.000

L17 ANSWER 9 OF 12 USPATFULL
ACCESSION NUMBER: 81:23301 USPATFULL
TITLE: Process for producing mop yarn
INVENTOR(S): Alibeckoff, Galib-Bey A., Lakewood, OH, United States
PATENT ASSIGNEE(S): Sponge, Inc., Cleveland, OH, United States (U.S.

corporation)

	NUMBER	DATE	
PATENT INFORMATION:	US 4264545	19810428	
APPLICATION INFO.:	US 1979-19382	19790312	(6)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Woo, Jay H.
LEGAL REPRESENTATIVE: Holder, Gross & Yavner
NUMBER OF CLAIMS: 9
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 2 Drawing Page(s)
LINE COUNT: 298

AB A mop yarn is produced by extruding onto the embossed face of a conveyor belt a first layer of a fiber reinforced sponge forming viscose mass, feeding regularly transversely spaced core yarns onto the conveyor advanced first layer and extruding a second layer of the sponge forming viscose mass onto the core yarn carrying first layer. The composite layers are then coagulated, regenerated and purified, and the resulting cellulose sponge web is then longitudinally slit to produce sponge strands in each of which is embedded and bonded at least one of the core yarns. The resulting cellulose sponge mop yarn is of rectangular transverse cross section and has low porosity water permeable top and bottom faces at least one of which is embossed and skinless side faces and each yarn has one or more core yarns of cotton twine embedded therein and bonded to the sponge material.

INCL INCLM: 264/045.800
INCLS: 015/229.000R; 057/210.000; 156/078.000; 156/161.000; 264/046.100; 264/147.000; 264/174.000; 264/243.000
NCL NCLM: 264/045.800
NCLS: 015/229.100; 057/210.000; 156/078.000; 156/161.000; 264/046.100; 264/049.000; 264/147.000; 264/172.110; 264/243.000

L17 ANSWER 10 OF 12 USPATFULL
ACCESSION NUMBER: 78:40208 USPATFULL
TITLE: Method and apparatus for extravascular treatment of blood
INVENTOR(S): Lupien, Paul J., 686 Le Cavalier, Ste-Foy, Quebec, Canada
Awad, John A., 632 Ave. Charron, Ste-Foy, Quebec, Canada
Moorjani, Sital, 2905 De la Providence, Ste-Foy, Quebec, Canada

	NUMBER	DATE

Searcher : Shears 308-4994

PATENT INFORMATION: US 4103685 19780801
APPLICATION INFO.: US 1976-646567 19760105 (5)
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Truluck, Dalton L.
LEGAL REPRESENTATIVE: Burgess, Ryan and Wayne
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1,5
NUMBER OF DRAWINGS: 5 Drawing Figure(s); 1 Drawing Page(s)
LINE COUNT: 605
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB There is provided a method and apparatus for the excorporeal treatment of blood of hyperlipemic anc hypercholesteremic patients whereby a portion of blood is drawn from such patients and treated with a divalent metal complex of a sulphated polysaccacharide coupled to a non-sulphated polysaccharide gel having its remaining sites blocked whereby a substantial amount of the lipoproteins present in the blood are bound to the gel and then filtering the blood before returning same to the patient.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 128/214.000R
INCLS: 210/028.000; 210/DIG.023; 260/112.000B; 023/258.500R
NCL NCLM: 604/005.030
NCLS: 422/044.000; 530/359.000; 530/415.000; 530/814.000

L17 ANSWER 11 OF 12 USPATFULL
ACCESSION NUMBER: 74:56359 USPATFULL
TITLE: MICROPOROUS FILMS
INVENTOR(S): Bridgeford, Douglas J., Champaign, IL, United States
PATENT ASSIGNEE(S): Tee-Pak, Inc., Chicago, IL, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 3852224	19741203
APPLICATION INFO.:	US 1972-289197	19720914 (5)

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Briggs, Sr., Wilbert J.
LEGAL REPRESENTATIVE: Brewer, Russell L.; Mosely, Neal J.
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
LINE COUNT: 780
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention relates to an improved process for producing a polymer having pores substantially micellar in size and uniformly dispersed throughout the polymer. The formation of the pores is accomplished by incorporating a material in admixture with the polymer, dispersed as micelles, then converting the resultant

admixture to a solid phase, and extracting a substantial proportion of the material in micellar form by swelling the solidified polymer with a solvent and converting the micelles to their monomeric constituent. Microporous films prepared in this manner are particularly useful as bacterial filters, binder compositions for ion exchange resins, and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.
INCL INCLM: 260/002.500M
INCLS: 106/122.000; 106/125.000; 106/164.000; 106/195.000; 106/196.000; 260/002.500AY; 260/002.500EP; 260/002.500F; 260/002.500H; 260/002.500HB; 260/002.500N; 260/722.000; 264/049.000
NCL NCLM: 264/049.000
NCLS: 106/122.000; 106/154.110; 106/169.450; 106/170.460; 106/202.100; 521/062.000; 521/088.000; 521/089.000; 521/094.000; 521/097.000; 521/149.000

L17 ANSWER 12 OF 12 USPATFULL
ACCESSION NUMBER: 72:6092 USPATFULL
TITLE: PROCESS FOR CARBONIZED CELLULOSE FIBER OR THE PRODUCTS THEREOF
INVENTOR(S): Miyamichi, Kazuo, Koriyama-shi, Japan
PATENT ASSIGNEE(S): Nitto Boseki Co., Ltd., Fukushima-shi, Japan

	NUMBER	DATE
PATENT INFORMATION:	US 3639140	19720201
APPLICATION INFO.:	US 1969-863518	19691003 (4)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 1968-74455	19681012
	JP 1969-70437	19690905
	JP 1969-70438	19690905
	JP 1969-70439	19690905

DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Katz, Murray
ASSISTANT EXAMINER: Sofocleous, M.
LEGAL REPRESENTATIVE: Irons, Birch, Swindler & McKie
NUMBER OF CLAIMS: 6
NUMBER OF DRAWINGS: 8 Drawing Figure(s); 6 Drawing Page(s)
LINE COUNT: 916
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Cellulose fiber or the product thereof is treated with a strength increasing agent selected from the group consisting of (A) ammonium sulfate, ammonium bisulfate, ammonium sulfite, ammonium bisulfite, ammonium thiosulfate, ammonium sulfamate, ammonium imidosulfonate, and mixtures thereof; (B) a mixture of at least

one compound selected from the group consisting of ammonium sulfate, ammonium bisulfate, ammonium sulfite, ammonium bisulfite, ammonium thiosulfate, ammonium sulfamate, and ammonium imidosulfonate with at least one organic nitrogen base; and (C) a mixture of an organic nitrogen base and an acid selected from the group consisting of sulfuric acid, sulfurous acid and sulfamic acid, and heat treating the product in an inert atmosphere at a temperature of at least about 400.degree. C. for a period of time sufficient to bring about carbonization.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

INCL INCLM: 117/046.000CB
INCLS: 117/228.000; 023/209.100; 023/209.400; 008/116.200

NCL NCLM: 427/227.000
NCLS: 008/189.000; 008/192.000; 008/195.000; 008/196.000; 423/274.000; 423/447.400; 423/447.600; 423/447.700; 423/447.900

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